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ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE REACTIONS OF DEGENERATION.

Delivered before the Fourth-Year Class of the University of Pennsylvania

BY JAMES HENDRIE LLOYD, M.D.,

Instructor in Electro-Therapeutics in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—I wish to-day to review in part the subject over which we have already gone, and to still further enlarge upon the law of electrical reactions. These are really the foundation of the science of electro-therapeutics. The names of Erb and Brenner in Germany are especially identified with this subject, while De Watteville in England has written the most lucid explanation of these reactions.

The first subject to be considered is the phenomenon known as electrotonus. Electrotonus refers to the condition into which a nerve passes upon having applied to it the poles of a battery. In this condition the nerve is found, under the cathode or negative pole, to become very much increased in its irritability, while under the anode or positive pole its irritability is lessened. In other words, the cathode or negative pole is an irritating agent, and the anode or positive pole is a depressing agent. It is still further found that on the removal of the anode there is then a slight increase of the irritability. Where formerly there has been depression there is a rebound or recoil, causing an increase of irritability.

When I speak of any agent as being irritating to a motor nerve, it is to be understood that that irritation is exhibited by movement of the muscle to which the nerve is supplied. My present remarks apply to nerves as found in the physiological laboratory, isolated from all surrounding tissues. The portion of nerve between the two poles, provided the poles are applied at some distance from each other, is neutral, and this is an important fact to remember. It is only under the poles that this change in irritability is observed, this being exhibited under certain

conditions by contraction of the muscular tissue to which the nerve is distributed. To put the subject in a concise and epigrammatic form, a recent writer has said, "The nerve is aroused in passing from a lower to a higher state of excitability."

It was formerly the custom of physiologists and also of therapeutists to regard altogether the *direction* of the current in their experiments and applications to disease: the direction was made all-important. When the current was passed downward in the direction of the nerve it was called the direct current, and when it was passed up the nerve the inverse current. The difficulty was that the subject became so involved in contradictions and such diverse results were obtained that it was difficult to elaborate any satisfactory law from this mass of contradictory facts. Under these circumstances it remained for Pflüger to elaborate from this confusion a systematized law, to which we shall come in due course of time. In the mean time we can again return to the fact that it is not the direction of the current, for, as I have said, the portion of nerve between the two poles is unaffected unless the poles are brought so close together that their mutual influences overlap. This shows that it is not the direction of the current which causes the excitation of the nerve, but that it is what is called the polar influence, possibly due to molecular change occurring under the individual electrodes, which causes muscular contraction as the nerve passes from a lower to a higher excitation.

It will not be necessary for me to go into all the details of the demonstration of Pflüger, but from his experiments and observations he was enabled to elaborate a series of laws, the whole point of which is simply this: That the phenomena displayed in the muscular tissue by contraction, and the condition of irritation of the nerves, depend not on the direction of the current, but (1) upon the pole whose influence is felt, (2) upon the strength of the current, and (3) upon the fact whether the current is made or broken. These are the three elements of the proposition. These results are constant and always capable of application, whereas in the old time one physiologist or therapeutist would assert that the descending current was the one to be used in order to produce certain

effects, while another would assert that the ascending current was the proper one to be applied under such circumstances.

I have told you, when speaking of electrotonus, that when a nerve is under the influence of an electric current its excitability is increased at the negative pole and depressed at the positive pole. The result of this is that the first stage of excitability which we have in a nerve, according to the laws of electrotonus and of Pflüger, results from the closure of the cathode, for this is simply saying that an exciting agent is applied to the nerve, just as though it were stuck with a pin or touched with a hot iron. The cathode raises the nerve from a lower to a higher state of irritability. The mildest current which will produce any reaction is that which first causes contraction at the closure of the cathode. This is expressed as follows: Ca C C, in which Ca stands for cathode, C for closure, and the second C for contraction.

What would be the second natural deduction from the laws of electrotonus and from Pflüger's observations? The nerve is excited in passing from a lower to a higher state of irritability. The anode depresses excitability, and therefore applying the anode will not cause contraction, but rather the reverse,—*i.e.*, it puts the nerve in a condition in which it is not so readily excited. If, however, the anode is applied for a minute and then taken away, there will be a rebound from the lower to a higher state of excitability, so that the second reaction, which, however, is not so strong as the cathodal closure, is anodal opening contraction. It is thus expressed: An O C. Bear in mind that I am still speaking of physiological experiments where the nerve is isolated from surrounding tissues.

The next reaction which we have will require a little further demonstration. According to the laws of Dubois-Raymond, the reaction of a nerve to electricity depends not only upon its passing from a lower to higher excitability, but also upon changes in the density of the current: that is, it is not caused by the absolute amount of electricity passing through the nerve at any particular moment (*i.e.*, the absolute density), but it is caused by the change of density of that current from one moment to another. For instance, take a strong current running through a nerve, and take a second nerve

under the same circumstances and transmit a mild current through it. There will be no reaction in either case while the currents are running. If, however, the current is made or broken, the density of the current is rapidly changed and reaction is produced. It is not the strength of the current so much as the sudden changes in strength which causes the reaction. A mild current passing through the nerve produces no reaction, but if the current is suddenly increased a reaction is produced.

Let us now consider the application of the current to the nerve under ordinary circumstances, for instance, as found in the arm of a man, covered with skin, fat, fascia, blood, and muscular tissue,—these being more or less good conductors, some of them, as the blood, being even better conductors than the nerve itself. It is impossible in applying electricity under such circumstances to so apply it that the current will be completely confined to the nerve-trunk. In other words, there is diffusion of the current from the electrodes, much of it, however, striking the nerve and passing through it *transversely* in a fan-like shape. You recall what it is that makes the positive and the negative poles. That is the positive where the electricity first impinges upon the nerve, and that is the negative where it leaves the nerve. The result of this is that under every electrode we have in the nerve not only the electricity represented by the sign of that particular electrode, but also the electricity of the opposite sign. We have also to recollect another condition. According to the law of Dubois-Raymond, it is the difference in density which determines the muscular contraction. Now, in the case supposed, the electricity from the positive pole flows into the nerve in a comparatively narrow stream. Where it enters the nerve it is dense. Where it leaves the nerve it does so in a fan shape, and is less dense. The electricity which enters the nerve immediately under the electrode is termed the actual pole by De Watteville, and has much the greatest density, while that which leaves the nerve is termed the virtual pole, and has much less density.

I have told you that the strongest reaction was produced by closure of the cathode, and that the next strongest was produced by opening of the anode, because in both the same thing was produced: the nerve passed from a lower to a higher

state of excitability. What, however, do we find in actual experience when electricity is applied to a patient? We find that we do get the strongest result from cathodal closure, but by no means always the next strongest reaction from anodal opening. The anodal closure contraction is quite as strong as that of anodal opening. How is this apparent contradiction to be explained? With anodal closure we get quite a strong contraction, and yet we know that the anode causes depression of excitability. The explanation is as follows: When we make anodal closure we get really not anodal closure, but we get the influence of the cathode which is exerted on the *opposite side* of the nerve, or in what De Watteville calls the *peri-polar* area. It is exerted where the density is much less, where the electricity is leaving the nerve. The consequence is that you have the cathode acting under anodal closure, but acting under a disadvantage, and as a result it does not give as strong a contraction as with the cathode on the skin. The peri-polar zone probably does not represent more than one-fourth the density. In illustrating this point a simple mathematical problem, somewhat after the manner of Erb, may be made use of. Ca is taken as equal to 4, the anode as equal to 2. The polar zone, or *near side*, where the electricity is much denser, equals 4, while the peri-polar zone, where the electricity is less dense, equals 1. The terms of the formula are therefore as follows:

$$\text{Ca} = 4.$$

$$\text{An} = 2.$$

$$\text{Pz} = 4.$$

$$\text{pPz} = 1.$$

If the cathode is acting in the polar zone, the formula is $4 + 4 = 8$: that is, the density added to the excitant. If, however, the anode is acting in the peri-polar zone, then $2 + 1 = 3$. These figures do not indicate the relative intensity, but are simply used for the purposes of illustration.

It is these demonstrations which enable us to understand many things about electrical reaction. They enable us to understand why it is that we get any contraction by closure of the anode. It is because we really have the cathode acting in the peri-polar zone, or the virtual cathode instead of the actual anode.

The last contraction which we have is

from opening of the cathode, represented by Ca O C. The cathode being an irritant, it is difficult to understand why taking it off should produce a contraction. It is easy to see how applying an irritant will cause contraction, but it is not so easy to see how the removal of an irritant will also produce contraction. It is only with a strong current that this can be obtained. The fact is that under these circumstances the cathode is not acting, but that you have an anodal opening in the peri-polar zone. It is of course acting at a great disadvantage, and the contraction is very slight, even with currents which are almost unbearable.

This is about all the demonstration which it will be necessary to give of the laws of electrical reaction, but I wish to give one illustration of their value. If you place the electrode on the median nerve, for instance, and make cathodal closure, there will be contraction of a certain set of muscles. Now, if anodal closure be made, you will possibly see a different set of muscles move, although the electrode has not been moved. The explanation of this is that, in the first instance, the cathode is acting in the polar zone, and consequently the upper fibres are especially affected. In the second instance, when anodal closure is made it is really a virtual cathodal closure, the cathode acting in the peri-polar zone, and a different set of nerve-fibres are irritated and a different group of muscles are thrown into contraction.

Take, for example, what are known as voltaic alternatives. If you have the electrode upon the nerve-trunk and break and make the current, you will find that you have the customary reaction; but if instead of simply making and breaking the current you suddenly swing it from anode to cathode, a much stronger reaction is obtained. Why is this? Suppose the current is passing and the anode is acting in the polar zone. Then you instantly change to the cathode, which will also act in the polar zone, so that you get anodal opening added to cathodal closure, and, of course, an increased effect. There are many other problems which can be worked out by these same formulæ.

I wish next to refer to pathology to show wherein these reactions are of value. Almost identical results are obtained whether the electrode is applied to the

nerve-trunk or to the muscular tissue. Changes in these formulæ are only obtained when there are changes in the nerve-trunks or in the anterior cornua of the spinal cord. When there is a pathological change, resulting perhaps from traumatism, the nerve becomes degenerated and may be gradually reduced to the condition of a mere fibrous string. Under these circumstances especially we get modifications of these reactions. These changes are also obtained in anterior polio-myelitis, which is characterized by an increase of the connective tissue which presses upon and blots out the cell-elements of the anterior cornua. We do not get changes in these formulæ when there is paralysis due to brain-lesion. In a case of embolism of the middle cerebral artery or of a clot in the ventricle, none of these reactions are obtained,—at least not for a long time, and then only when descending sclerosis affects the anterior cornua. Changes in these formulæ are therefore significant of changes in the anterior cornua, in the nerve-trunks, or in the muscular tissue.

To be brief, these changes may be said to be a diminution in cathodal closure and an increase in anodal closure, so that the anodal closure may excel the cathodal closure in the power of causing contraction. Why the virtual cathode in these pathological changes excels the actual cathode has, as far as I am aware, never been satisfactorily explained. Cathodal opening contraction is also increased. The character of the contraction also changes; instead of the usual quick response the muscle contracts slowly, and with a prolonged effort.

I wish also to say that these changes are not so invariably present that you may expect to find them in all cases of peripheral palsies. I will show you cases to-day which I have brought here not because I can show these changes, but because I can *not* show them. This simply demonstrates the fact that, no matter what the books may say, in many of these cases the changes are slight or wanting. If they are present they have positive value, but their absence is not always of great negative value. Some fibres may escape and carry the impulse. There may also be a degree of improvement which will obscure the reactions of degeneration which had been found on a previous occasion.

While we cannot always explain this satisfactorily, we still have the fact that the reactions of degeneration are not so constant as some would have us believe.

I wish to also state that the first signs of degeneration are not only the qualitative signs of increase of the anodal closure over the cathodal closure, and after a time even cathodal opening contraction, but also the *quantitative* changes. This means that the whole excitability of the nerve to galvanism is at first increased. It is not, as would naturally be supposed, decreased, but increased. After the increased excitability has diminished and is passing on to decreased excitability, the qualitative changes appear. This may be the reason that we cannot always elicit the qualitative changes. The nerve may have been injured only sufficiently to produce the quantitative changes, and under curative measures or the remedial force of nature it has recovered before the degeneration has gone sufficiently far to produce qualitative changes.

I shall now ask your attention to some of the cases which I have here. This first case is one of lead-palsy. I do not intend to enter into any speculations as to the nature of lead-palsy. It is sufficient to know that lead-poisoning usually causes paralysis of the extensor muscles of the forearm. This man is improving, and the reactions of degeneration are not as marked as they previously were. In order to excite the extensor muscle of the forearm we must, of course, apply the electrode over the trunk of the musculo-spiral nerve, which will be found midway between the bend of the elbow and the insertion of the deltoid muscle. This is called the *active* electrode. The other, or *indifferent* electrode, we place at a distance on patient's body,—usually on back of neck or over the sternum. If this man exhibits any of the reactions of degeneration, we should expect that the anodal closure would be as strong as, or stronger than, the cathodal closure. I first make cathodal closure, and a very slight reaction is obtained. I next try anodal closure. The contraction produced is at least equal to that produced by cathodal closure. It should be decidedly less in health. I next try the effect of anodal opening. In order to practise this it is well to allow the current to pass through the nerve for a short time, in order to get the trunk into a condition

of anelectrotonus, or a condition of depressed excitability. Making anodal opening, I obtain no contraction. Applying the electrode to the radial nerve, we find that the contraction from anodal closure is decidedly stronger than that from cathodal closure. This man has passed beyond the time in which there is a quantitative increase in the excitability, and it takes a strong current to affect him. The current which I have used was forty cells of the modified Leclanché battery.

In applying electricity in this way, you should always begin with the mildest possible current which will produce response from cathodal closure. This is to be tried first. Eight or ten cells are usually sufficient for this, and then the current is to be increased by the addition of two cells at a time until anodal opening or anodal closure contraction is elicited.

This second case is a very rare one. It is apparently a case of lead-poisoning in which the lead has not sought its usual area of devastation, but has first affected the deltoid muscles, and is now involving the muscles of the thigh. This is a recent case, and has hardly progressed far enough to give the reactions of degeneration. There is a slight reaction to cathodal closure. Anodal closure seems to be as strong as, and possibly a little stronger than, cathodal closure contraction.

The next case is one of unilateral wrist-drop. When we find this we may be almost sure that the man has been sleeping with his head on his arm; but a man rarely or never sleeps long enough on his arm to produce wrist-paralysis, unless he has been indulging in ardent spirits. This wrist-drop is due to pressure on the musculo-spiral or radial nerve. In this case there have been no qualitative signs, and this is a good indication. There are, however, quantitative signs. The anodal closure contraction is much less than the cathodal closure contraction. I shall next try to obtain an anodal opening contraction. I have tried this in many cases, and have come to the conclusion that anodal opening contraction is by no means as prominent as the books state. There is slight reaction, but that cannot be called a change in quality. I next try these reactions on the well arm, and we find that they are much *less* marked on the sound than on the affected side; hence there is a decided quantitative change.

This is another case of unilateral paralysis due to the same cause as was the previous case. In this case, however, the median nerve was pressed upon, leading to paralysis of the flexor muscles. This is also a recent case. I apply the electrode at the bend of the elbow over the median nerve. There is, as you see, some degeneration reaction.

The last case which I show you is one of peripheral palsy, the nature of which is somewhat obscure. It is supposed to be a case of anterior polio-myelitis. It came on after some severe exertion in the use of the arms. The muscles of the ulnar distribution are the ones affected. This case has given some few reactions of degeneration. With twenty-two cells we obtain cathodal closure contraction which is more marked than anodal closure contraction, but, as I have said, at one observation we often obtain different results than at a former trial. On a former occasion the muscles of the ulnar distribution gave an increase of anodal closure over cathodal closure contraction.

I may say, in conclusion, that the best interrupter to use for these investigations is one attached to the handle of the active electrode, and under control of one finger.

ORIGINAL COMMUNICATIONS.

THE WESTERN HEALTH-SECTION.

BY W. THORNTON PARKER, M.D.
(MUNICH).

A RECENT article of mine in the *Archives of Medicine*,* concerning the climate of New Mexico,* has brought me several letters from Western physicians, somewhat severely criticising my opinions concerning that country. A few physicians, especially one in Denver, have kindly sustained my views, and appreciated the difficulties attending any medical man who tries to explain the conditions obtaining at a famous health-resort.

Two articles have appeared within the year in the *Medical Times*,—"The Southwest as a Health-Resort," by Dr. H. C. Wood,† and "The Northwest as a Health-Resort," by Dr. J. J. Leiser,‡—and Dr. S. A. Fisk has contributed a communica-

* Concerning the Climate of New Mexico. *Archives of Medicine*, October, 1884.

† Philadelphia *Medical Times*, October 6, 1883.

‡ *Ibid.*, January 26, 1884.

tion on "The Climate of Colorado" in the *New York Medical Record*.^{*} These three articles go very far to prove that the day has passed by for medical men to commend for pulmonary diseases a "humid mild climate." Such a climate cannot cure, even if it be able to mitigate, the miseries of pulmonary diseases.

Looking at the map of the West, we find a section of country bounded on the south by lat. 30° N., on the west by the Rocky Mountains, on the east by long. 100° W., and running northward as far as civilization extends. In this section we have the *best* opportunities, to my thinking, for the cure of what is popularly known as consumption, to be found perhaps in the whole world; and here, if anywhere, will be found the atmosphere which is most desirable.

Considering the evidence offered us in recent medical literature, not excepting the teachings of Prof. Loomis and others in standard medical works,[†] we must admit that, in general, *dryness*, either cold or mild, is the most desirable condition sought for, other things being equal, in the treatment of pulmonary diseases. Elevation is not so desirable as dryness, and I believe, with others, that it may destroy the good results obtained or obtainable by living in a dry climate. Equability is too often confounded with mildness, and is hard to find. In the northern climates we have a steady winter, and, where out-of-door life can be enjoyed, this is a valuable aid in the "cure."

A great mistake is often made in mapping out sections as *desirable*. In drawing the lines of the imaginary section just described, I have said that *in* this section we have the *best* opportunities for the cure of consumption; but I do not claim that *every* square mile of this health-giving tract might contain a sanitarium, by any means. Journeying about the Rockies, the climate will be found very changeable, presenting every kind of exposure and protection, with even some sections quite moist and malarious, others dry and yet poisoned by unhealthy air. Besides all this, opportunities for the most ordinary comforts, and even safety, of life, are lacking in many districts, while they abound in others. But, taking this division in general, we can confide pulmonary pa-

tients there with considerable hope, provided they have the means and the courageous will to get well.

Dr. Wood claims that "where warmth and dryness are associated, the conditions are most favorable." Dr. Leeson stoutly maintains, on the other hand, that where clear cold weather and dryness are associated, the conditions are most favorable. Here, then, we can see the end of doubts. Depend upon it, we are nearing a solution of the problem, even if it be the old story repeated of the shield of two colors.

I have said that the overwhelming evidence, as well as practical experience, teaches that *dryness* is the main chance for cure. Leaving New Mexico in the middle of October and coming swiftly East, although in the midst of an unusually *dry* season, I found the change tremendous, and when at last I reached this "city by the sea," as it has been poetically (?) termed, nature rebelled, and a sharp illness followed. In the experience just detailed it is seen how great is the risk in coming down from 6700 feet above (the altitude of Fort Union, New Mexico) to the sea-level; but often we can ascend from an altitude of say 6000 feet to 8500, yet suffer from humidity! During the month of September I was ordered from Fort Union, New Mexico (6700 feet), to Fort Lewis, Colorado (8500 feet), *but on the Pacific slope*. I felt the change from a dry mild climate to a moist chilly climate very severely, and a winter in such a climate would have been a very undesirable experience. A severe attack of broncho-pneumonia in May had left my lungs in a very sensitive condition, and I was slowly regaining health when this exposure to the climate of the Pacific slope seriously threatened sickness, and a longer residence would have undoubtedly proved seriously injurious, to say the least.

The section of country west of the Rockies, comprising what is known as the "Pacific slope," is in my opinion very undesirable. Colorado between Pueblo and Denver, and some places north, contain the most desirable health-resorts at present within reach, and it would be hard to rival the glorious scenery and life-giving atmosphere of Colorado Springs and Manitou. Penetrating southward of Pueblo, I can speak highly of Trinidad, Colorado, and within a few years, if the better class of citizens is permitted to carry out its plans

^{*} New York Medical Record, November 8, 1884.

[†] Vide Loomis's Practical Medicine, page 206.

for reforming and improving the town, a delightful and accessible health-resort will there be found.

Moving still farther southward, we pass through a beautiful section of country, now devoted to cattle-raising. As we look out of the cars in the early morning, it seems as if we had entered some wonder-land, slumbering, as it were, in all its native beauty, before the arrival of the thousands who would gladly possess it, if the curse of land-grants and dishonest "rings" could be removed.

Continuing on our way, Las Vegas is reached, and, save for a visit to the "Springs," can be left behind. The Springs are beautifully situated, and when the hotel is finished they will be quite a resort, no doubt, but always inferior to Manitou unless great changes occur in this Territory. In New Mexico, three points besides the Springs can be recommended to invalids desiring moderate elevation, dryness, and equability: they are Santa Fé, Albuquerque, and Silver City, and in their desirability as residences for invalids I think they stand in the order named.

Since writing my former article on the climate of New Mexico, I have been inclined to bring to the notice of the profession the many advantages possessed by Albuquerque. It is undoubtedly true that much that is bad and undesirable, and even violent, exists in that "city of the hard name;" but it is improving steadily. A good class of citizens is already on the ground, and positively excellent society is already to be found, with good schools, churches, stores, etc., and also well-built houses at fair rental. It is somewhat warmer than Santa Fé, and, though not so interesting, is quite as healthy. For those who desire "everlasting summer," as the climate of southern New Mexico has been called, Silver City—bright and shining as its name would imply—offers health and a fair prospect of *wealth* with patient effort.

The climate of New Mexico is "mild and dry," but its elevation, if acceptable and agreeable, must be taken for life. Change from New Mexico eastward to the Atlantic or westward to the Pacific is not advisable, and in the case of the invalid is dangerous. The longer the stay the *greater* the risk. The climate, after one is accustomed to it, slowly but surely winds its confining coils around one, and if experienced for any length of time cannot reck-

lessly be exchanged for a lower and moister level. The effect on the system seems to be a gradual thinning of the blood and general enervation, amounting in some cases to feelings of general debility, indolence, and languor. It seems very risky for patients afflicted with heart-troubles to be sent to an elevation of over four thousand feet above sea-level, if even that much can with safety be endured. It is the climate, to a certain extent, which accounts for the sleepy, worthless feeling which so many complain of.

Great caution is necessary with regard to food. Coffee and arterial stimulants generally must be diminished, and meats should be used sparingly, vegetables, bread, and milk being used more as substitutes. Amongst the population coarse bread, corn-meal, eggs, chicken, and much "red pepper" are used for food, and a short residence in the country explains it all. The torments of the land are the frequent dust-storms, which dishearten and fairly sicken one. These occur principally in the winter and spring. During the prevalence of these storms one must stay in the house, and even then the dust covers everything and makes life, at best, "horrid." Meat and vegetables are poor and comparatively expensive. The pleasant side of the picture is the *constant bright sunshine* and clear skies, and glorious mornings and evenings. Many nights I have spent sleeping on the ground, the clear skies, star-filled, for canopy, and the delicious atmosphere refreshing and invigorating the body. Little dew falls, and one wakes in the morning after such a rest, refreshed and cheered. In what a strong contrast is life within "adobe" houses! The air is so light that windows must be left open, even at the risk of draughts, and unless particular to have a plentiful supply of air—which is not always possible—one awakens fatigued and weary. The rainy season is in the summer, but this is not objectionable. The showers come in the afternoon, refreshing all nature, and they are soon over, and do not keep one in-doors very long. The nights are cool, and there is little if any annoyance from mosquitoes. The study of New Mexican climate, to a visitor, is simply bewildering. A series of maddening contradictions are discovered, in which there is much to admire and much to deplore.

Since my return I notice a tendency for blessings to brighten as they take their

flight; but, in view of the fact that Colorado, Wyoming, Dakota, and Montana are improving in their accommodations for invalids each day, and offering, in my opinion, more certain and more pleasant sanitariums than New Mexico ever can hope to do, I should prefer (all things considered) to recommend patients North rather than South. It depends very much upon who is to be sent. For a nervous, feeble invalid, Santa Fé or Albuquerque might be better, but for a young man of good spirits, with some hope still left, I should urge Colorado or Montana.

In the rush West we are liable to lose sight of many healthy places in Iowa, Minnesota, Nebraska, and Western Kansas. In the admirable paper of Dr. Wood no mention is made of the "Pan-handle" of Texas,—that section of country between New Mexico and the Indian Territory. The climate there is well described by Dr. Wood, and its excellent condition may be known to Dr. Loomis when he speaks of "the extraordinarily dry belt of country which runs northward from San Antonio, Texas,"—the "home of the cowboy," as the tract is called running northward to Kansas through the "Pan-handle." Towns are scarce, but not so wild and disagreeable as one would imagine. After leaving the railroad at Dodge City it is a ride of two hundred miles to Mobeetie, the first town of the Pan-handle.

I do not think that the plan of "roughing it" is a practical one for invalids, or to those inexperienced in camping out, and there is too much danger and hardship to make many men desire it very much; although I certainly do believe that to get well camping is the very best way in which to live for health's sake. Nothing is better in summer than the canvas house well built and well arranged, and equipped with that indispensable adjunct,—the most important member of the party,—a really good cook. Plenty of nutritious food must follow the abundant exercise and exposure to the fresh air, and a small allowance of books is quite necessary for mental food. And here comes in the question of tobacco. To those who love the delicious plant it will be a comfort to turn to the appreciative yet temperate comment upon the "weed" contained in the "United States Dispensatory:" "Moderately taken, it quiets restlessness, calms mental and corporeal inquietude,

and produces a state of general languor or repose which has great charms for those habituated to the impression. . . . It must have properties peculiarly adapted to the propensities of our nature to have thus surmounted the first repugnance to its odor and taste and to have become the passion of so many millions." Is not this authority great and good enough to stop us from taking the pipe and the delicious "Durham," or any other tobacco, from our patients? Undoubtedly its loss is depressing to the mind and adds discouragement, in that the lover of the pipe, deprived of his solace, is forced to believe that he must be either very sick to be ordered to do without it, or else that he must be feeble if a return to it would be dangerous. I have met many who have had their tobacco-supply ordered stopped by their medical advisers, but found no evil results following a return to the fragrant pipe; on the contrary, sometimes a commencing habit of constipation was thereby arrested. The importance of this reference to tobacco-smoking cannot fail to be recognized, and the digression will be pardoned by those of my readers who are old smokers.

The weight of a folding cot is not much addition to the luggage, but its comfort in camp is worth a great deal. Some scorn the cot as being incompatible with true camping, but, when we consider perils by rattlesnakes and the deadly Western skunk, those who take Dr. Wood's prescription of roughing it will do well to have with them, and for use, a comfortable, strong, folding cot.

In conclusion, I think that we should not forget to properly estimate the importance of increased altitude as a possible source of disease, and guard our patients accordingly. I believe that the altitude and the dust-storms, the cheerless, damp adobe houses, and the poor food and the depressing social (or unsocial) life, are strong arguments against sending patients, and particularly very sick patients, south of Trinidad, Colorado. The country as a sanitarium has been overestimated; and yet there is much, in spite of all I have said against the climate, to encourage one to hope for some relief in cases of early phthisis, if not a positive cure, provided that the sick one has the double protection of a full purse and a careful attendant. It is no place for a *poor* invalid: even the

rich will find it expensive enough. There is little to suggest exercise in New Mexico. A listlessness overhangs all life, and one longs to see something besides the mud and mud walls, the dust-storm, and the sky. The mountains and the sunshine help, but do not entirely atone for all we have left behind us. The trip for all is a lottery; for some are prizes of gold, for others health, and these prizes may bring happiness, although they must be enjoyed where they are found; but for many, very many, is a hastened death, or such loneliness that death itself may be regarded as a relief.

The question is asked, "Is not the climate of New Mexico better than we can find in most of the States east of the Mississippi River?" I do not hesitate to declare that it is. However, let the physician beware how he hurries his patient away from home-comforts and friends; let him carefully study different sections of country, so as to know and understand them, and to be able to tell his patient what he can reasonably expect when he reaches a given place. Personal experience, after all, is better than studying the roseate-hued pen-pictures of health-resorts and railroad books of travel. Physicians should investigate for themselves, in order that invalids may be wisely directed. To study climatology without travelling is like studying anatomy without dissecting, and he who recommends resorts which he has not seen and examined may be the means of making much unhappiness.

ATLANTIC CITY, N. J., December 30, 1884.

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,
Philadelphia.

SYPHILIS OF THE EAR.

DR. JÉGU (*Annales des Maladies de l'Oreille*, etc., Mai, 1884), in a graduating thesis, treats of syphilis of the ear under two grand divisions of acquired and hereditary disease. His conclusions respecting acquired syphilis of the ear are, first, concerning the external ear,—viz.:

1. A syphilitic chancre is found in the external ear only as a very rare exception.
2. Secondary manifestations are of greater or less interest according to their situation upon the auricle or in the auditory canal. Syphilides of the auricle are

not specially distinguished from other specific eruptions elsewhere upon the cutaneous surfaces. Syphilides in the auditory canal are not frequent. Chronic aural diseases and uncleanness predispose towards their occurrence at this point. Papulo-ulcerative syphilides are accompanied by symptoms of otitis externa,—viz., a sero-purulent discharge, pain, and more or less swelling of neighboring parts. They tend to hypertrophy. Having become hypertrophied, they offer a marked tendency to abundant suppuration, efface the calibre of the canal more or less, and produce violent otalgia and various disturbances of hearing,—viz., tinnitus and deafness of all degrees. They resemble in appearance aural polypi. Such syphilides last, on an average, four or five weeks, and are healed without trace, by simple means,—viz., detersive washes, cauterizations with nitrate of silver, and dry local treatment. Excision does not hasten their cure.

3. Tertiary lesions in the auricle and in the auditory canal are in the form of gumma. Upon the auricle, on account of their development in a non-extensible tissue, syphilitic gummata produce at times singular deformities, which are dependent, however, upon their situation, their volume and number. In the auditory canal, gummy tumors, as observed so far, have been small, circumscribed, and unaccompanied by disturbed hearing. Finally, there are syphilitic exostoses of the auditory canal, following external otitis, generally two in number, one upon the posterior, the other upon the anterior, wall, narrowing the calibre of the canal about one-third (E. Ménière).

Middle Ear.—The guttural orifice of the Eustachian tube may be the seat of a chancre. The initial lesion at this point is accompanied by adenitis of the posterior cervical or of the submaxillary ganglia, and by secondary phenomena, generally intense,—viz., in the bucco-pharyngeal mucous membrane, painful angina, nasopharyngeal catarrh, ozæna, and deafness. Upon the skin numerous syphilides occur. Syphilitic chancres of the throat can produce, by contiguity, obstruction of the Eustachian tube and hyperæmia of the tympanic cavity. The phenomena which are thus produced demonstrate the mode of action of secondary syphilitic anginas upon the middle ear.

Secondary syphilitic results in the middle ear comprise lesions arising from the contiguity of the parts to the pharyngeal lesions, and results entirely independent of contiguity. The first class, which are the most frequent, offer a train of symptoms varying according to the intensity of the lesions in the pharynx. When limited to the Eustachian tube they present symptoms of obstruction of this canal. Most frequently the cavity of the tympanum is invaded in its turn, with the characteristics of a simple acute otitis media, rarely passing to suppuration. The membrana tympani presents different changes, according to the intensity of the tympanic disorder. These results generally disappear with the cessation of the lesion which has given them origin. Nevertheless, obliteration of the Eustachian tube by cicatrices has been recorded by Gruber. Hence the prognosis relative to improvement of hearing in such cases should be guarded. General treatment must be aided by appropriate local treatment.

Direct syphilitic affections of the tympanic cavity consist in a chronic suppurative otitis media, in the production of which scrofula is held to play a predisposing part in some cases. Furthermore, Gruber and Schwartz admit the occurrence of an otitis media catarrhalis of the dry form, which affects the two ears successively, and is accompanied by changes in the membrana tympani and deafness, and which is not improved by general treatment.

In the tertiary stage disease of the middle ear is consecutive to gummy growths in the naso-pharyngeal region. Following the ulceration resulting from the breaking-down of a gumma, cicatricial obliteration of the mouth of the Eustachian tube has been observed.

Internal Ear and Auditory Nerve.—Syphilitic lesions in the internal ear occur in four ways:

1. Direct lesions.
2. Propagation of lesion from the middle ear.
3. Osseous lesions.
4. Central nervous manifestations reflected upon audition.

1. The affections of the internal ear by direct lesion manifest themselves sometimes in the secondary and sometimes in the tertiary stage. They often coexist

with ocular affections. They are characterized by Ménière's symptoms: (1) Rapid diminution of the hearing supervening without noteworthy symptoms in either the external or internal ear, and which is unmodified by mechanical treatment. (2) Enfeeblement or even suppression of the perception of the tuning-fork and of the watch by the bones of the skull. (3) Amelioration and even cure of the deafness by a mixed and energetic treatment.

Clinical facts seem to be corroborated by anatomical research, which shows that the lesions in the labyrinth consist in a periostitis and in a hyperplastic cellular infiltration.

2. Labyrinth diseases by propagation of tympanic lesions present nothing special. There is an association of symptoms of otitis media and of otitis interna.

3. Osseous lesions which make an impression on audition are naso-cranial osteitis, caries of the mastoid apophysis, and especially caries of the petrous portion of the bone.

4. Cerebral syphilis is foreshadowed by various forms of aural or auditory troubles. Sometimes they are at first the only symptoms of the disease. They are generally accompanied by other cerebral symptoms. Sometimes they consist in subjective sensations limited to one ear, or they may be ambilateral. Sometimes they are manifested by a progressive diminution of hearing which may amount to absolute cophosis. They may, in fine, present all the phenomena of Ménière's disease. The prognosis is variable. Recognized from the outset, they are, fortunately, influenced by specific treatment. In some cases the deafness is permanent. Auditory maladies appear in the premonitory symptoms of specific tabes. Sometimes they are tinnitus in various forms, in other cases they manifest all the symptoms of Ménière's disease. They are of limited duration, and disappear more or less completely.

Hereditary Syphilis of the Ear.—Next to dental and ocular diseases, aural maladies constitute the most constant symptom of hereditary syphilis. They arise from contiguity of pharyngeal lesions and from direct lesion. As in acquired syphilis, so in the hereditary form, gummas and naso-pharyngeal ulcerations may communicate themselves to the middle ear and produce a simple otitis media,

which, aside from its mode of development, presents nothing special.

2. Primary manifestations by direct lesion are (a) otitis media suppurativa, and (b) profound deafness.

Otitis media suppurativa of hereditary syphilis manifests itself chiefly in early childhood. It becomes established without pain or any symptom of an acute process. The absence of pain, without being absolutely characteristic, is a diagnostic sign of some value. The course of the otorrhœa varies, sometimes being healed in a few weeks, and in other instances persisting for several years, and is accompanied by grave lesions of the tympanic cavity and of the membrana tympani, and ends in deafness.

Profound deafness in hereditary syphilis makes its appearance about the age of puberty. It occurs suddenly, without lesions in the middle or external ear, often being consecutive to a parenchymatous keratitis. Its onset may be characterized by vertigo and tinnitus aurium of various qualities. The deafness is on both sides. Sometimes both ears are affected at the same moment, at others successively. The lesion may be in the labyrinth, as shown by Moos, or it may be in the floor of the fourth ventricle in the ambilateral cases, as held by some.

The prognosis is grave. Specific treatment, which is efficient in parenchymatous keratitis, is ineffectual in heredito-syphilitic deafness.

This paper of Dr. Jégu gives a very good sketch of our present knowledge concerning the subject of syphilis of the ear. All otologists agree as to the rarity of syphilis in the external ear.

In a recent number of the *Archives of Otolaryngology* (vol. xiii. page 241, December, 1884), Dr. J. Zucker, of Berlin, gives an account of

TWO CASES OF CONDYLOMATA, AND ONE CASE OF PRIMARY SYPHILIS OF THE EXTERNAL EAR.

In this article Dr. Zucker states that Mracek (*Wiener Med. Presse*, No. 1, 1880), in his exhaustive report of over four hundred cases of the primary manifestation of syphilis outside of the genital tract, cites but three cases of primary syphilis of the external ear: one reported by Hulot (*Annales de Dermatologie et de Syphilographie*, 1878), of a child with a chancre on the mastoid process, attributed

to infection by the nurse; a second of a chancre at the base of the tragus, of problematical origin; and, finally, a case from his own practice of a chancre on the lower portion of the mastoid, from the kiss of a prostitute. Pellizari (Milan, 1882) has recently examined with great care forty-one cases of the transmission of syphilis without coitus, and found only one in which the primary lesion appeared in the form of a chancroid on the left cheek, and a second one on the lobe of the auricle on the same side in the same individual. The origin of these primary infections, occurring in a father, was attributed to the use of a handkerchief which had been previously employed by his son to wipe his penis.

Finally, Dr. Zucker gives an account of primary syphilitic infection of the external ear, beginning near the tragus, and originating very probably from the kiss of a prostitute. Four weeks after the exposure an excoriation was noted near the tragus, which steadily increased in size and began to suppurate, and eight weeks after the exposure there appeared on the surface of each hand three or four small, round, slightly scaly efflorescences, which facilitated the diagnosis of primary syphilitic infection. Close examination of the ear, nine weeks after the exposure, showed that the anterior wall of the cartilaginous meatus bulged excessively inward and backward, that the tragus was livid red, twice as thick as normal, with its front surface covered by a darkly pigmented, radiating cicatrix. The entire parotid region seemed involved, was greatly swollen, hard as a board, but not at all painful. Beneath the angle of the inferior maxilla a bunch of separable yet indurated and enlarged lymphatic glands were found. The hearing was but slightly diminished, and there was no secretion from the ear. The posterior wall of the cartilaginous and osseous meatus, as well as the membrana tympani, were normal. The naso-pharynx was free from complications, and the genitals were intact.

AURAL SYMPTOMS OCCURRING IN HYSTERIA, AND THE HYSTERICAL ELEMENT IN AURAL DISEASE.

Drs. G. L. Walton and C. J. Blake have called attention to this subject in a recent number of the *Annales des Maladies de l'Oreille et du Larynx*, September, 1884. It is held by these observers that

aural symptoms occurring in hysteria, and, conversely, the hysterical element in aural disease, are subjects which should receive the attention of neurologists and aurists, but which have been somewhat neglected. It is important in some cases to recognize the fact that hysteria is a factor in aural disease, and also to carefully investigate aural symptoms when they occur in cases of hysteria and other nervous affections. "There are unquestionably numerous cases in which the subjective symptoms of an existing aural disease are increased to an extent which gives them undue importance in the mind of the practitioner by the co-existence of functional cerebral disturbance, evidencing itself in the train of symptoms to which collectively we give the name of hysteria."

Of the cases reported by Walton and Blake, the first illustrates the extent to which an aural disease, severe in its objective as well as its subjective symptoms, may be simulated by a hysterical patient; the second the influence which an existing aural disease of comparatively mild type may have in originating marked hysterical symptoms in a case already of hysterical tendency, and, reflexively, of exciting symptoms leading to the apprehension of graver aural disease.

A CASE OF GASTRIC ULCER—RECTAL ALIMENTATION—RECOVERY.

Read before the Philadelphia Clinical Society, December, 1884.

BY JAMES B. WALKER, M.D.,

Professor of the Practice of Medicine, Woman's Medical College; Lecturer on Clinical Medicine, Woman's Hospital.

JOSEPHINE C., aged 33 years, single, weight 98 pounds, presented herself at the Woman's Hospital Medical Clinic, January 13, 1881. She was a domestic, with a father living and well, and a mother dead of consumption. The patient had always been strong and well until the last three years, although the menstrual function, established at the age of 15, and which since then had continued regular and painless, had nevertheless always been extremely slight, never lasting more than a day or two.

Three years before, she had a severe attack of vomiting. The ejecta were very dark, and resembled "coffee-grounds." Once free blood was vomited. The stomach was at that time entirely non-retentive of food.

A year and a half after this attack she had a vomiting seizure, in which, however, no blood was vomited. In this attack she presented herself for treatment at the Woman's

Hospital Dispensary, and was referred to my clinic. She was shown to the class as a case of ulcer of the stomach, and treated accordingly, and rapidly convalesced without admission to the hospital wards.

On November 25, 1880, another attack commenced with symptoms of dyspepsia, gradually increasing until intense pain was occasioned by ingesta, until all kinds of food, whether solid or liquid, were vomited. This aggravated condition has existed ever since.

During the long intervals between these three separate seizures the stomach has performed its work normally, no care being necessary in regulating the quality or quantity of the food in order for comfort.

On admission to the wards of the hospital she presented a decided cachexia, which, with her profound emaciation and exhaustion, raised a question as to the presence of malignant disease. The mucous membranes were all very pale, the tongue flabby, pale, glazed, and marked by the teeth along the border, with two stretches of a yellowish-white fur along the sides posteriorly, not reaching the edges or the tip. The stomach was *absolutely* non-retentive, even water in teaspoonful doses inducing vomiting. The bowels were greatly constipated, no movement having occurred for the two weeks previous to admission.

A tender spot has existed at the epigastrium since the commencement in November, and now a somewhat diffuse area of tenderness exists, which, however, does not involve the entire stomach.

The pulse is small, weak, and 88 per minute. Heart-sounds normal, except accentuation of second sound. Urine acid, specific gravity .1018, no albumen.

She was placed in bed, a blister applied to the epigastrium, 30 grains of bismuth subnitrate given every four hours; $\frac{1}{4}$ grain argenti nitratis at night; 4 ounces beef-tea by rectum every four hours, and a teaspoonful of milk by the mouth every hour. The bowels were at once moved by a copious enema. The first day in the hospital under this treatment the epigastric pain was intense. Vomited several times, but retained the rectal doses of beef-tea. The second day felt easier, but, as she still vomited after the small amount of milk by the mouth, gastric alimentation was suspended entirely. The blister raised but slightly, and was renewed in four days, when, although kept in place for twelve hours, it failed to vesiculate.

The following day, third after admission, did not vomit at all, but rejected a small amount of each enema.

The ninth day, had an attack of pain in stomach, but no nausea or vomiting.

The tenth day, complained of rectal tenderness.

On January 29, fifteen days after admission, first complained of feeling hungry.

February 3, was given a teaspoonful each of milk and lime-water, which was repeated every hour, causing some pain, but neither nausea nor vomiting. It was discontinued after a few doses.

February 6, twenty-three days after admission, drank a small amount of milk without pain.

February 7, some beef-tea administered by the mouth, which acting kindly was continued; enemata continued also.

February 8, had pain after the milk, but none after the beef-tea; milk discontinued.

February 9, sat up an hour without much fatigue; nitrate of silver stopped; took three cups of beef-tea during the day.

February 10, took four cups of beef-tea without unpleasant results; enemata discontinued.

February 13, some milk with lime-water allowed, but it was digested with some discomfort; beef-tea caused none.

February 14, bismuth powders discontinued.

February 16, warm baths once daily, followed with olive oil inunctions on account of the harsh dryness of the skin.

February 17, thirty-four days after admission, small amount of solid food allowed once; no discomfort.

February 18, regular meals allowed without discomfort.

February 22, skin becoming moist and soft; felt no discomfort after eating; bowels moved naturally.

February 28, patient improving daily; lips becoming red; epigastric pain and tenderness no longer present.

March 4, forty-nine days after admission, discharged entirely well.

This patient presents several phases of peculiar interest.

1st. The cachexia was quite as marked as in most cases of gastric cancer, and much more so than in many cases of that affection which have fallen under my observation. But the disease was believed to be non-malignant, chiefly on account of the previous attacks which had each terminated in complete recovery, with comparatively long periods of health between them. Was it gastritis, and not ulcer? The rather more diffused tenderness than ordinarily exists in gastric ulcer left no doubt in my mind that there existed an aggravated and irritable condition of the mucous membrane about the area or areas of ulceration, but the still limited tenderness excluded to my mind chronic gastritis. Vomiting of blood had only occurred in the first seizure, three years before; but, as it is absent quite frequently in gastric ulcer, the want of it did not invalidate the diagnosis of the latter disease.

Again, the case is interesting on account of its recurrence. This, however, is the natural history of gastric ulcerations,—not that they must recur, but that they *may*. Certainly the cicatrix left after the first recovery will favor ulceration rather than the healthy mucous membrane in one not so affected.

The case is still further of interest on account of its persistent continuance. About November 25 the first symptoms were noticed. The time was fixed the more easily because this is one of our annually recurring *gastric epochs* from which time is reckoned. This persistence in a disease which naturally tends to recovery is, however, easily explained on considering the patient's habits.

Attempts at cicatrization were combated by the entire absence of any hygienic method to favor it until her admission to the hospital. Indeed, this, together with her great exhaustion, induced us to insist on her coming under the careful management of the hospital, for she was reported as entirely unable to supervise such method or submit to it except under strict discipline; whereas, under this, improvement commenced at once and continued uninterruptedly.

Etiologically, the case is not very instructive, except that the feeble attempt at menstruation suggests the possibility in a young woman of good health as possibly directly inducing the ulceration by the process of vicarious menstruation, with subsequent necrobiosis of the ecchymosed tissue, a condition apparently more frequently concerned in inducing this disease than all others combined.

The case is especially interesting, to my mind, in the long period of time the patient was exclusively nourished by beef-tea digested and absorbed by the rectum. For twenty-three days the patient lived on these, and not only "held her own," but gained slightly in strength, if not in flesh. In these days of peptonized foods this would be sufficiently striking; but the fashion was not then instituted.

As regards the medicinal treatment, what was given answered the purpose, and under its administration improvement was gradual and persistent.

In cases of gastric ulceration with hemorrhage I am in the habit of using ol. terebinth., gtt. xx every two to four hours, in a little sweetened water.

My attention was first called to the hæmostatic action of this drug in the most nearly fatal case of gastric ulcer I have ever seen, which fell under my observation while still a student. Iron, opium, silver, lead, tannic acid, gallic acid, and some other agents were successively administered, with unvarying failure and simply aggravation of pain, discomfort, and hemorrhage, until the patient was almost exsanguine. Turpentine arrested for the first time the downward tendency, and under its use hemorrhage was at once arrested and recovery prompt and permanent. Since that time I have frequently used it in cases similar, though in none so severe, with invariable success, so that I look upon turpentine as the least irritating and, at the same time, most certain hæmostatic in hæmatemesis, especially when due to gastric ulcer. Its efficiency is too little appreciated by the profession. Nor is its province limited to the arrest of hemorrhage. Equally is it serviceable, apparently, in favoring the process of cicatrization, as advocated by the late Professor George B. Wood, in typhoid ulceration. It was not used in the case under consideration, as the irritable condition of the stomach demanded our utmost respect, and, knowing that the tendency of the disease was to cicatrization, only protective measures were instituted.

The question which arose at the outset of the case, as to whether it was one of malignant disease whose only tendency, despite whatever was done, was to destruction, or, on the other hand, an intensely aggravated case of a disease whose tendency is towards recovery if so permitted, was most satisfactorily decided in favor of the diagnosis of non-malignant disorder by the complete recovery of the case.

I am indebted for the official record of this case, upon which my paper is based, to Dr. Anna E. Broomall, then resident physician of the Woman's Hospital.

COCAINE DISKS.—The most convenient form for the employment of cocaine muriate for ophthalmic practice is in that of gelatin disks. Dr. Joseph Warren, of Boston, who suggests this method, has employed them with much satisfaction. Each disk contained about half a drop of an eight-per-cent. solution (gr. $\frac{7}{15}$). They were made for him by Metcalf & Co., and are recommended on account of their convenience and economy. —*Boston Med. and Surg. Journ.*, January 29.

A NEW METHOD OF STRAPPING THE TESTICLE.

BY WM. BARTON HOPKINS, M.D.,

Surgeon to the Episcopal Hospital and Out-Department of the Pennsylvania Hospital.

STRAPPING swelled testicle in the ordinary way, with adhesive plaster, is effective only so long as the yielding quality of the tissues of the organ is acted upon by the pressure with which the plaster is first applied, there being no elasticity in the muslin. The dressing must be frequently renewed, therefore, in order to follow up the rapidly-subsiding swelling. I have found that india-rubber prepared and applied in the following manner obviates this necessity, requiring renewal not more than once in four or five days, besides making much more persistent pressure than can be obtained by adhesive plaster. The advantages it possesses over the other forms of elastic pressure which have been employed, as the rubber bandage and the compressing-bag, are the perfect uniformity of pressure which can be exerted upon the entire organ, and the readiness with which it may be adapted to any case.

Two adhesive strips three-quarters of an inch in width are first made to encircle the scrotum at the upper portion of the testicle, in order to hold the latter well down in the bottom of the scrotal sac, as in the ordinary method, and to form an unyielding base of support for the elastic pressure to act upon. I originally used rubber for this, but found that the succeeding strips of rubber forced the organ partially through the encircling band thus formed, caused the material to become plicated, and thereby gave rise to pain. The testicle being thus fixed, four bands of rubber are applied after the manner shown in the accompanying illustration. These are made of "bandage-gum" cut into strips of the required length, an inch and a quarter wide, and retained with "rubber cement." A few drops of the cement are rapidly and thinly spread upon a strip with a spatula, and a few drops more upon the adhesive plaster and skin of the scrotum. These surfaces are allowed to nearly dry, care being taken that the rubber meanwhile does not curl up on itself and stick fast. One extremity of the strip is then placed upon the adhesive plaster posteriorly, carried forward beneath the testicle, and fixed in

front. Another is applied in like manner laterally, and two more obliquely, four



being usually sufficient to cover in the organ.

As with india-rubber used elsewhere for a permanent dressing to induce pressure, great caution must be exercised not to constrict the parts too firmly: about four ounces traction on each strip when the dressing is completed being sufficient to aggregate the maximum pressure likely to be required.

2018 SPRUCE STREET, PHILADELPHIA.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL COLLEGE OF MEDICINE, LOUISVILLE, KENTUCKY.

CLINIC OF DUDLEY S. REYNOLDS, M.D.,

Professor of General Pathology and Diseases of the Eye, Ear, and Throat.

Reported by ALLEN KELCH, M.D.

GENTLEMEN,—Before introducing the patients who are to be the subjects of our study for the next hour, permit me to suggest that the best method of inquiry in most cases that attend a public clinic like this is to ignore all that rubbish commonly called "the clinical history of the case." Believe nothing of a material nature concerning the development of a disease or its progress which is not clearly marked in the phenomena present at the

time, or which does not sustain some perceptible relation to the present phenomena. The application of this rule of caution shall be made apparent to you in the course of this clinic.

SYPHILITIC KERATITIS WITH ULCERATION OF THE LARYNX.

Mrs. G., æt. 39, came here three months ago with keratitis punctata, and incrustation along the margins of the lid matting the lashes together and causing the lids to adhere during the night. She had a papillary eruption about the face, chiefly upon the forehead, the nose, the cheeks, and the chin, with a few papules about the neck, and fewer still upon the wrists and arms; the eyes were morbidly sensitive to light; the lids were swollen, and the hot tears flowed freely upon the slightest exposure to light. She claimed to have neuralgia, and mentioned the name of a respectable practitioner here in the city as having attended her for several weeks consecutively for that disease. She says he gave her quinine and morphine for a while, and subsequently arsenic. He blistered her behind the ears. She said she had never been sick a day before in her life, except in confinement. She claimed to be the mother of five healthy living children, the youngest of whom is now eight months old. She says her husband's health is excellent.

On her first appearance here, a muffled and peculiar tone of voice was noticed whilst she related this history I have just repeated. She said the breaking-out she had was heat and mosquito-bites. As some of you may remember, I had her statements recorded for the very purpose stated in the beginning of my lecture to-day.

Examination of her throat at that time revealed extensive phagædenic ulceration, beginning at the base of the epiglottis and extending down in front of the anterior attachment of the left vocal cord.

She was ordered a half-ounce of bicarbonate of soda to be dissolved in six ounces of water as a lotion for the eyes, for the purpose simply of dissolving and clearing away the accumulated matter in the lashes; an ointment composed of one scruple of boric acid and a half-ounce of petrolatum was directed to be applied to the lids morning and night. She was directed to take of iodide of potassium one ounce, two ounces each of camphor-water

and simple syrup, a teaspoonful in a glassful of water every four hours.

She made rapid improvement; in a week the ulceration of the larynx had almost entirely healed; the eyes were now less sensitive to light; the lids were no longer swollen, and their margins were clean. The strength of the medicine was then increased by the addition of ten grains of the iodide to each dose. In a week more her voice was quite natural; she had improved in flesh, and she said she had suffered no pain at all after the first dose, and she was able to come to the clinic alone. There are now no appearances of disease beyond a few very minute and dimly-marked opaque spots in the cornea.

I sent for this woman to come to-day that we might institute this comparison between the facts in the course of her disease and the history she gave. It is clearly apparent to my mind, both from the nature of the corneal disease and the ulceration of the larynx, laying aside the equally almost certain evidence afforded by the eruption upon the face, that this woman was suffering from constitutional syphilis. The result of the treatment has fully confirmed the diagnosis. Now, as to the peculiar characteristic appearances in the cornea and in the larynx. First, any distinctly and clearly marked effusion of plastic matter into the proper substance of the cornea, involving both eyes and occupying different circumscribed positions in the cornea, is almost certainly syphilitic. It is as clearly characteristic as the sore with everted margins and gray base commonly called the hard chancre, the true chancre, or the Hunterian chancre. Likewise the ulceration in the larynx, sharply defined with ragged and everted margins, surrounded by inflammatory effusion, presents all the characteristic appearances of syphilitic ulceration. This papular eruption upon the skin is not so positively indicative of syphilis. It is likely a practitioner inexperienced in dermatology might confound it with some other form of papular disease.

The history given by Mrs. G. might have been, according to her judgment, entirely truthful. She is not a woman, as you observed when she was present, of sufficient intelligence to be able to give such a well-marked history of periodical neuralgia and to paint so good a picture

of what is in this section of country called chronic malaria.

If this were an uncommon sort of case I would not devote so much time perhaps to pointing out the discrepancies between the phenomena present and the so-called clinical history, but it too often happens that the general practitioner of medicine does not exhibit sufficient curiosity to induce him to look into the larynx and nasal passages, or to concentrate the light with an ordinary converging lens in such a manner as to illuminate the cornea. Some very excellent practitioners—men well informed in the literature of the profession—exhibit this carelessness, which is, in cases like Mrs. G., little less than criminal.

As she enjoys good vision (sufficient for all her requirements) and suffers now with no pain or other evidences of disease, she may go, with the injunction to take forty grains of iodide of potassium in a tumblerful of water every night for the next two months.

OTITIS MEDIA PURULENTA.

J. H., 18 years of age, an intelligent young man, a tobacco-stripper. For several years he has had a progressive impairment of hearing. Two weeks ago to-day it was extremely difficult, as you may remember, for me to make him hear my voice; the external auditory canals were both filled with muco-pus containing a quantity of dirt from the tobacco-factory. This was mopped out with small portions of cotton-wool rolled upon the end of a probe; the Eustachian catheter was then employed, and air blown through the middle ear, bringing away a considerable quantity of muco-pus. A solution of chloride of sodium (3-3) was then employed, about one minim being placed in the distal end of the catheter, and, the nozzle of the Politzer air-bag being placed over the tip, forcible compression was made, driving the minim of solution through the walls of the catheter in such a way as to permit the escape of it in the form of spray into the Eustachian tube, and by continued blowing the dissolved inflammatory matters were easily blown out through the perforated drum-membrane. Following this a single drop of Lambert's listerine was blown through the catheter in the manner just described. This practice has been kept up once a day since, through

the kind attention of my assistant. Now Mr. H. is able to hear my watch at two inches from the right ear and three inches from the left. He experiences no difficulty in hearing all conversational tones.

Another difficulty from which he suffered, and which created considerable amusement here at our last clinic, deserves attention now. You have doubtless noted the absence of the very offensive odor which attended his presence in the arena at his last call here. You may remember he told us the source of the odor was his feet, and that a member of the class, and two or three outside practitioners, had for weeks been taxing their skill in the use of various kinds of lotions to overcome it. I dare say you will recall to mind the advice I gave him on that occasion,—to go home and buy a flesh-brush and a bar of good soap, and to take a bath every morning before breakfast and put on a clean pair of socks daily.

[Amidst great laughter the young man announced that the soap and water had done more good than all the medicines, and if he had only known that before he could have saved a good deal of money which he had spent at the drug-store.—REP.]

The affliction called stinking feet is singularly limited to people of constipated habit and whose feet are strangers to soap and water and clean socks.

ANTERIOR SYNECHIA FOLLOWING PERFORATION—USE OF COCAINE.

Annie F. was brought here by a member of the class a month ago with the left eye closed: she was anæmic and emaciated. She had just recovered from the measles, and the gentleman who brought her to the clinic said that the measles had "settled in her eye." Examination showed a perforating ulcer of the cornea about midway between the inner and the inferior margin of the cornea. The iris was at that time bulging through the opening, and the child was in great pain. A solution of the sulphate of eserine, one grain to the ounce of water, was directed to be instilled three times a day, and the eye to be closed with dry absorbent cotton secured in position by a strip of adhesive plaster extending from the cheek to the forehead. The other eye was directed to be protected from the glaring light by what are called in London "smoked eye-protectors." The smoked eye-protector is

known in this country as the "London smoked coquille," or shell-shaped glasses.

She was ordered ten minims of the syrup of the iodide of iron after each meal, and, with some dietary regulations, made rapid improvement. The ulcer soon healed by granulation and cicatrization, the iris, however, remaining attached. It is desired to have her return to school, but on the slightest attempt to read the eyes fill with tears. This reflex irritation of the eyes, shown by a sense of discomfort and a sudden flow of tears on attempting to read, is no doubt chiefly due to the fact that the pupil of the left eye has been almost entirely obliterated by the falling of the iris into the lips of the corneal opening at the time of the perforation of the cornea by the ulcer. When no particular strain or effort is required to see near objects, no irritation is developed; as soon, however, as the patient is able to see a little with the left eye, the accommodative effort to harmonize and at the same time to fix the two eyes upon an object calls forth the phenomena described. I have here a small iris-knife strikingly similar to that of Dr. Hays, but curved upon the flat. Passing this knife through the cornea, and taking great care not to permit the aqueous humor to escape, I am able, as you see, to carry it across the anterior chamber above the pupillary opening and obliquely downward toward the nasal side. I am now able to get the point of my knife below the point of attachment of the iris to the cornea, and by this very delicate and carefully conducted sawing motion you observe now that the iris is cut loose and has fallen away from its position in contact with it, and the pupil at the same time is much enlarged. No hemorrhage has occurred, which I attribute in part to the hæmostatic powers of the cocaine (a solution of which was instilled five minutes before the operation was begun). The patient remains unconscious of the nature of the proceeding, and it evidently produces no pain. On the withdrawal of the knife a slight oozing of aqueous takes place. It is difficult to account for this, and it has been remarked by other operators, some of whom have not hesitated to attribute it to the effects of the cocaine upon the connective-tissue fibre of the cornea, which causes the opening a moment ago occupied by the knife to close speedily upon its with-

drawal. I myself believe that, while the cocaine may have this effect, in this instance it operates in another manner not before mentioned,—viz., it reduces the tension of the eyeball. This effect of the drug opens up a new field for its application in the treatment of the painful tension so often present in phlyctenular keratitis, and greatly diminishes the danger of iridectomy for the relief of glaucoma, as I shall now show you.

GLAUCOMA—IRIDECTOMY UNDER COCAINE.

Mr. A., 52 years of age, is now blind in the right eye, the pupil of which is widely dilated, the eyeball tense and painful to the touch. This obeys the law of periodicity in this: that two months ago it became painful and tense, the patient had flashes of light, with an unnatural halo around artificial flames of light, and on going into the street he was astonished at seeing only part of an object at a time. The pain continued for forty-eight hours, and then subsided, leaving the eye somewhat tender to the touch and with impaired vision, the halo remaining around the gas-jet or the lamp-flame. In about ten days the same phenomena returned, accompanied by a violent sick headache lasting about forty-eight hours and leaving the patient in a state of great nervous prostration. At intervals regularly of about ten days these phenomena recurred, until two weeks ago sight was extinguished in the right eye. Four days ago the phenomena reappeared in both eyes, creating so much alarm in the mind of the patient that he at once left his home and came to this city to find relief.

I saw him for the first time this morning. He was then suffering morbid sensibility to light and some nervous headache. He had tension $+2$ in the right eye, and tension $+1$ in the left. I instilled into each eye one drop of a solution of hydrochlorate of cocaine (gr. ij-5j.) In five minutes he opened his eyes and faced the window without discomfort. In seven minutes the tension of each eye was perceptibly reduced. In eight minutes I made an ophthalmoscopic examination, discovering what has long been recognized as one of the objective signs of glaucoma, the sharply-cupped disk in the left eye, the beaded appearance of the retinal veins in the right, the disk being deeply cupped in both. This cupping of the disk is, in

fact, a well-marked depression of the optic nerve.

Strangely enough, the examination provoked no reflex irritation; in fact, it gave the patient no pain whatever.

I shall now proceed to instil one drop of the cocaine solution into each eye, to prepare him for the removal of a portion of the iris.

[REPORTER'S NOTE.—3.40 P.M., instillation made. 3.45, patient declared insensibility of the eye and mounted the operating-table. 3.47, speculum introduced between the lids of the right eye, and the operator introduced Jaeger's keratome just within the margin of the sclera, passing it on into the anterior chamber, withdrawing it cautiously, allowing the aqueous humor to flow out slowly. The iris appearing between the lips of the wound was seized with toothed forceps, drawn out, and the protruding portion snipped off with scissors. This was followed by no hemorrhage, and after rubbing the angles of the wound with the index-finger to prevent the incarceration of portions of the iris, a drop of a solution of eserine (one grain to the ounce of water) was instilled, and the speculum withdrawn. 3.52, the patient's left eye, being still anæsthetic, was subjected to a precisely similar proceeding. 3.55, iridectomy had been completed in both eyes without any pain whatever and without hemorrhage.]

Gentlemen, you observe how quietly this man submits to the operation of cutting into the eyeball, drawing out and snipping off with the scissors a portion of the iris, and, what may appear to be the ordinary occurrence to an inexperienced observer, no hemorrhage followed. I can scarcely remember the time when I have done iridectomy for the relief of glaucoma without some hemorrhage. Indeed, it is one of the great sources of danger in the operation, but, as you have now observed, this operation was entirely painless as well as free from hemorrhage; no nausea, retching, or vomiting, no sudden flow of blood to the head and face, and consequently the vessels subjected to no unusual tension, which removes all the sources of danger to the eye from the operation. These disagreeable phenomena almost uniformly attend the operation under chloroform or ether, and the proceeding is so painful upon the morbidly sensitive eyes

of the glaucomatous subject that it is generally practised with their aid. The cocaine is unquestionably the greatest discovery of modern times, far exceeding chloroform in its applications to ophthalmic and aural surgery. It may be well to note that the hydrochlorate of cocaine made in this country by McKesson & Robbins, of New York, is that which I am now using. It is in every respect equal to that made by Merck, of Darmstadt.

IMPACTED ACCUMULATIONS OF LONG STANDING IN BOTH EARS.

Mr. S., 49 years of age, suffers impairment of hearing which he thinks is hereditary. He is desirous, however, of having something done to arrest, if possible, the further progress of the disease. He hears my watch upon pressure against the tragus; he hears it equally well when it is brought into contact with the mastoid process. On lying down at night he has for years been disturbed by hissing sounds. He has never done anything by way of treatment, because his father and his mother were both hard of hearing, he has several brothers afflicted in the same way, and he feels confident the disease is hereditary.

Examination shows an accumulation of something almost exactly the color of the membrane lining the auditory canal, which is entirely filled. With a blunt hook about the size of a No. 2 Bowman's lachrymal probe it is easy to detach the margin of the foreign substance occupying the external ear. By careful coaxing with this blunt hook the whole mass is moved from its position, when the patient is instantly seized with a tickling in the throat and cannot restrain the disposition to cough. Coaxing, as you see, still further now brings this enormous mass, which is something more than a quarter of an inch in diameter, somewhat cylindrical in form, and just about three-fourths of an inch long. As you observe, it is covered with a whitish film, which is evidently a cast from the lining of the external auditory canal, including the outer surface of the drum-membrane. Inspection now shows that the walls of the external auditory canal in contact with this foreign mass are quite thin, suffused with blood, and look ready to bleed. Mopping the passage with a solution of carbolic acid (3ss to the 3 of distilled water) by means of a piece of cotton rolled on a probe and

dipped in the solution causes a slight sense of pain and smarting, which is, however, but momentary in duration. Holding the nose, the patient is now able by forcibly blowing to distend the cavity of the tympanum and cause the drum-membrane, which was before depressed, to assume its normal position, when the patient exclaims that he "feels an awakening into a new world." He is at once able to hear the watch at ten inches which but a few moments ago required to be pressed against the ear.

Inspection shows the other ear to be in precisely the same condition. The same process of manipulation as that employed in the other ear brings forth a similar mass of foreign matter. This seems to be compounded of an outer tough, amber-colored substance, like that which constitutes the crust upon the surface of an eczema, the whole enclosed by a film of epidermis. There is no telling how long this formation has been in the ear. The patient does not remember when his hearing was as acute as it is now since the removal of this foreign matter. He is ordered to have one grain of resublimated iodine, five minims of pure carbolic acid, and half an ounce each of glycerin and distilled water, with enough iodide of potassium to make a good solution, to be dropped into the ear every morning and evening,—the carbolic acid to allay irritation, and the iodine to stimulate the circulation and glandular functions of the membrane. The method of inflating the middle ear by holding the nose, closing the mouth, and forcibly blowing is known as Valsalva's method, although every boy in the world who ever went swimming has practised it to expel the water from his ears.

This patient may go with the assurance that such accumulations in the ear are in no way hereditary; and should any further trouble appear, we hope to be able to afford as prompt relief again as we have done to-day.

TRANSLATIONS.

PRIMARY SCLEROSIS OF THE COLUMNS OF GOLL.—In *Le Progrès Médical* (No. 49) an interesting case of typical progressive sclerosis of the spinal cord, occurring in a man, 48 years of age, is reported by M. L. Camuset. With enfeeblement (ideas of

grandeur) of the mental faculties, he had some paresis of the lower extremities, supposed originally to have been produced by cold. His pupils contracted and expanded normally; his sight was good. Walking was difficult and slow, but he had no lancinating pains and no gastric crises. The difficulty in standing upright was not increased upon shutting his eyes. The patient's malady remained stationary for a year, and then without known cause he became very much excited, and finally developed acute mania ten days before death.

At the autopsy the spinal cord appeared healthy to the eye, but under the microscope a manifest sclerosis was localized at the innermost part of the posterior pyramids. In the cervical region, where the column of Goll is very limited, it was seen that the sclerosis had invaded the entire column in its transverse section. This was also noticed in the dorsal and lumbar regions, though in the latter the lesion was much less regularly distributed. The lesion was more marked posteriorly, and progressively diminished towards the front. The brain appeared normal; there were some evidences of chronic meningitis, but none of the lesions of general paralysis.

The following reflections were offered upon this case by the author. He passed without discussion the interesting question of the association of medullary sclerosis with mental alienation, which was made more interesting by the absence of the usual cerebral lesions of general paralysis. He regretted that the sensory and motor phenomena had not been studied more minutely during life. However, observation showed that a sclerotic phlegmasia produced by, or at least immediately following, a chill had been localized in the columns of Goll, and showed a tendency to extend, so that the root faisceaux would certainly have been attacked in their turn. In this case the patient, had he lived longer, would have shown the symptoms of ordinary locomotor ataxia, which symptoms were wanting because they did not have the time to develop. The columns of Goll are made up by the commissural fibres, and their lesion does not produce visual troubles, ataxia in walking, or fulgurant pains. It was found, moreover, that the patient could stand with his eyes shut without being any more unstable than when his eyes were open.

ACID REMEDIES AND THEIR RELATION TO DYSPEPSIA.—Professor Riegel, in the *Archiv für Klinische Medicin*, December, 1884, contributes a very long article on the Pathology and Diagnosis of Diseases of the Stomach. He concludes that a small mixture of organic acid produces no injurious influence upon digestion, but that a greater quantity of this organic acid, as well as muriatic acid, will in a high degree impair digestion. On this account the disadvantageous influences of sour fermentation in many forms of dyspepsia may be attributed to the presence of too rich a mixture of acid, especially lactic and butyric acids. The favorable operation of an alkaline remedy in a case of the abnormal formation of acid can therefore be readily accounted for. On the other hand, his experiments demonstrate that the exhibition of muriatic acid, which has become so popular of late in the various forms of dyspepsia, is not justifiable or even safe. Too much acid in the treatment of diseases of the stomach is as undesirable as too little. Muriatic acid can be useful only in those cases where a lack of the required quantity of acid is evident. P.

ON THE ACTION OF ERGOT.—Dr. R. Kobert, in the *Archiv für Experimentelle Pathologie und Pharmacologie*, December, 1884, contributes a paper on the Action of Ergot. He concludes that the freshly-prepared ergot will undoubtedly produce strong contraction of the uterine muscles. This is a well-established fact, one which the Chinese possessed a knowledge of a thousand years ago. Ergot is capable of producing contractions of the uterus sufficient to cause delivery and produce abortion, and is also capable of inducing contractions sufficient to control hemorrhage from that organ.

He has received positive proof of the poisoning in animals. Cows which eat the ergot while in pasture frequently abort. He considers it almost useless to administer ergotin by the mouth, as it cannot, after reaching the stomach, induce any uterine contractions, because it becomes too much dissolved and weakened. He also claims that, while the subcutaneous injection of ergotin may sometimes induce uterine contraction, few preparations are to be considered reliable. Ergotin, he thinks, is active only when it contains cornutin. P.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 7, 1885.

EDITORIAL.

TREPHINING THE SKULL FOR A
GROWTH IN THE BRAIN.

IN our London letter is the fullest account that we have yet seen of the case of Dr. Hughes Bennett, in which, after a diagnosis of a localized lesion in the cerebral convolutions, Mr. Godlee trephined and removed a neoplasm. Strangely enough, as it appears to us, this case was immediately published in the *London Times* as a triumph of vivisection, the sole credit being awarded to Ferrier's experiments for the successful operation. A glowing picture was given of the salvation from certain death of the patient, and a contrast drawn between the restoration to health and usefulness of the breadwinner of the family and the value of sundry monkeys and dogs which had been sacrificed in order that the profession might gain the necessary knowledge to treat the case. Unfortunately for this argument, as it happened, the patient perished with meningitis, and most distinctly was not cured by the operation. In an editorial "On the Justification of Vivisection" in the *British Medical Journal* this case is discussed at length, but the impression given by the description is that the diagnosis and operation were solely directed by the interpretation of the symptoms furnished by physiological experiment. "Guided by these symptoms," are the words, "a tumor was diagnosed in the cortex, in the upper part of the fissure of Rolando."

The account given by our highly esteemed London correspondent, however, throws more light upon the case, and communicates features which had not previ-

ously been published, so far as we are aware. There was a history of a blow upon the right side of the head (it will be remembered that this is the common history of glioma), followed by excruciating pain over the vertex, with a spot of localized tenderness on deep pressure in the upper parietal region a little to the right of the middle line, the symptoms of twitching of the muscles of the left side of the face, and convulsive seizures in the left arm and leg, followed by monoplegia of the arm and paresis of the leg, with attacks of vomiting cerebral in character. Upon such a basis modern surgery could make, and undoubtedly did make, the diagnosis of a small tumor involving the cortex in the position indicated, with sufficient certainty to warrant the operation. Thus far the credit might certainly be divided between clinical surgery and Hughlings Jackson, to whom we owe much of our knowledge of localized discharging lesions in the brain. Take away the history of the case, the localized tenderness and pain, the Jacksonian epilepsy, and leave only the symptoms of monoplegia and paresis, and it would be a bold surgeon who should operate in a case with nothing more to guide him than the information afforded by the study of motor centres in the brain made by Hitzig and Ferrier, especially if he were at all familiar with the writings of Brown-Séquard upon the same subject.

This is not written to decry the value of vivisection (it cannot be denied that cerebral localization aided in the diagnosis), but to discourage what appears to be a tendency to exaggerate the value of physiological experimentation at the expense of clinical medicine and surgery. Vivisection owes its justification to its ability to contribute to knowledge, and not to the result of attempts to utilize that knowledge in medical practice, attempts which may be premature and injudicious. Dr. Klein was certainly right in taking the

position before the Royal Commission that vivisection is to be practised with a view of adding to our stock of knowledge, and not with any idea of its immediate practical application to medicine. In this view those engaged in original investigations generally concur.

THE INSANE DEPARTMENT OF THE PHILADELPHIA HOSPITAL.

SOME of the members of the consulting medical staff of the Philadelphia Hospital have presented a communication to the Board of Guardians pointing out many glaring defects in administration, in the Insane Department especially, arising, it is distinctly stated, through no fault of the chief medical officer, Dr. Richardson, who is doing the best that he can under adverse circumstances, hampered as he is by official parsimony and Bumble-ism. The present buildings are obviously unfit for hospital purposes; they are ill ventilated, and are so shamefully overcrowded and under-attended that poor insane patients cannot under present circumstances receive either proper medical attention or have their physical necessities decently provided for. The Insane Department should be removed to a distance from the city, out into the open country, where appropriate buildings should be provided, and where the insane might be classified and receive all the advantages of skilful and considerate treatment. Humanity and justice demand that the wards of the commonwealth shall be kindly cared for.

We hope that the matter will not be allowed to rest until the city authorities rise to the appreciation of the necessity of providing accommodations more in keeping with the high standing of the community. In the mean time, should a fire occur at Blockley, the Kankakee horror might be re-enacted at our very door. The move has not been taken in this matter any too soon.

INTERNAL URTICARIA.

A VERY interesting communication was made during the last month to the Clinical Society of London by Dr. J. J. Pringle, on a case of recurrent hæmatemesis associated with and possibly due to urticaria. The patient had had a series of attacks of urticaria due to errors in diet apparently. Finally, after several years, the spells occurred with increasing frequency and severity; the tongue, mouth, and fauces now showed symptoms of disorder, and there was vomiting of a clear, watery fluid. During the succeeding year urticaria was almost constant, and at intervals attacks of great severity occurred, during which large quantities of pure red blood were vomited. There were no purpuric wheals or spots detected. Associated with this condition was a hypertrophy of the heart. The hemorrhage was thought to be due to capillary rupture. He subsequently had attacks of gout.

In discussing the paper, Sir Andrew Clark said that he had upon a former occasion pointed out the association of asthma with urticaria, regarding the former as an urticarial affection rather than a spasmodic one. On the other hand, systematic writers on dermatology consider asthma as one of the causes of urticaria.

ÆSTHETIC ORCHIDECTOMY.

AN editorial in a contemporary upon the Semiramidian operation states that "the testicles have been removed in order to secure sopranos for the Church," but does not state from what the innocent sopranos are to be made secure. Can it be possible that they are in greater danger of molestation or feel a greater sense of insecurity among those of the male sex whose register embraces the upper notes of the scale than from those who by nature are less aspiring in their vocal efforts? Is the tenor more base than has been suspected, and the bass less so? We pause for a reply—from the sopranos.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

WHEN Professor Ferrier went down to the West Riding Asylum, near Wakefield, at Easter, 1874, the writer accompanied him, and was a witness and a voucher for the earliest of those experiments on the brain which have since made Ferrier's name world-famous. After seeing a good deal of his work, the writer expressed himself to the effect that before ten years were gone and past some surgeon would remove a tumor of the brain under the direction of some physician. The diagnosis would be so precise that the surgeon could be told the exact spot for his trephine. That forecast has been verified. Dr. A. Hughes Bennett (son of the famous John Hughes Bennett, Professor of the Institutes of Medicine in the University of Edinburgh) recently diagnosed the position of a tumor in a man's brain, and under his instructions Mr. Rickman Godlee, Assistant Surgeon to University College Hospital,—a man of rare promise,—cut through the skull and removed the tumor, with immediate relief to the symptoms. The case got into the journals, and thereupon a storm began to blow. Such a proceeding was so direct an outcome of knowledge founded upon experiments on animals—not only the diagnosis, but the line of after-treatment even which rendered such an operation defensible—that, of course, the anti-vivisectionists must be stirred up. These cantankerous mortals having taken up the position that nothing had been learned from experimentation upon animals, that nothing worth the having had come out of the cruelty to animals, and had been so blatant about their opinions,—now an opportunity having come for taunting them, it must be made the most of. Putting up a red rag to a bull excites that animal; and a letter in the *Times* giving an account of the case and the operation roused them into action like a swarm of hornets. Letter followed letter until the public must pretty well comprehend the merits of the case by this time. Unfortunately, as it happened, the man died of an after-consequence of his surgical wound (meningitis), and so the anti-vivisectionists have a leg left to stand upon. Still, the operation was a success and a path-breaking experiment which must lead to a new departure in the treatment of encephalic disease. Not unlikely the trephine and the aspirator will come into play ere long in serous effusions, and even in apoplexy when blood is being poured out and compressing the contents of the skull.

One outcome of all this contention is to bring Professor Ferrier and his work prominently before the public, doubtless to his professional advantage. Unfortunately, however, the professor happens to be a man cast

in a sensitive mould, and the attentions of his enemies are very unpalatable to him. Most men would thank their stars for such an opportunity of coming before the public, and look upon the assaults of these enemies as blessings in disguise; but not so in this case. It was no doubt highly unpleasant to read at breakfast that three barristers have applied for a warrant for you at Bow Street, as Professor Ferrier did some time ago when the anti-vivisection party thought they had caught him at a disadvantage; but there is a silver lining to the cloud, or a golden lining, rather, perhaps!

Another outcome is, of course, the spread of a knowledge of the nervous system and its diseases, now so rapidly advancing with mighty strides. Perhaps some account of the case may be welcome to your readers. The patient was a healthy young man who, four years ago, was hit on the head by a piece of timber, but not so severely as to lay him up. Occasional headaches came on after this, and then occasional twitchings of the tongue and left side of the face. Then the "fit" ran from thence down the left arm and leg, without loss of consciousness. At intervals he had more complete convulsive seizures. Twitchings of the face and arm occurred daily, but never together. Loss of power in the left arm followed, and, later still, weakness in the left leg. The general health was good, but pain over the vertex was frequent and violent,—that excruciating pain which Dr. Moxon (in his articles on headache which appeared in the *Lancet* a few years ago) has described as occurring with organic disease of the brain. Tenderness on deep pressure was found in the upper parietal region, a little to the right of the middle line. Cerebral vomiting was also present. The congeries of symptoms told of cerebral mischief, probably a tumor. Further indications pointed to its locality,—viz., the right side of the head and near the motor centres in the neighborhood of the upper third of the fissures of Rolando.

Dr. Bennett argued that it must be of limited size, as the hand-centres were alone severely injured, irritation only being exhibited in the leg, face, and eyelid. It was a careful diagnosis, which every unprejudiced mind will admit could not have been made, or even approached, without the knowledge derived from the early experiments of Fritsch and Hitzig, and the more complete and elaborate work of Ferrier. The only aid that could be given to the patient was the removal of the growth, which was clearly near the cortex. Mr. Godlee removed a triangular piece of the skull, slit up the dura mater, and exposed the surface of the brain. Nothing abnormal was to be seen. Still, so confident were all in the accuracy of the diagnosis that an incision was made into the brain, when a hard glioma was felt, which was about the size of a walnut. It was removed without

difficulty. The hemorrhage was arrested by the galvano-cautery, and the edges of the scalp brought together by sutures. The result was magical. The vomiting ceased, the lancinating pains in the head vanished, the convulsions disappeared, and the patient felt well and expressed the greatest gratitude for the relief so afforded to him. For twenty days this went on, the only cause for anxiety lying in the wound, which was not satisfactory. Then, unfortunately, symptoms of acute meningitis set in, to which the patient ultimately succumbed. The progress of the case, however, was such as to demonstrate the effects of the removal of a tumor of the brain as regards relief to the symptoms it set up. The untoward result was one of the accidents which attach to the serious operation of trephining, and had no special reference to the malady for which the operation was performed.

The scene of this operation will some day be put on canvas, and the operation itself will become historical. The practical outcome of vivisection was completely satisfactory as illustrating what we owe to careful experimentation. And if Professor Ferrier's experiments still need any justification, that is now forthcoming. The experiments performed by Professor Gerald Yeo teach us that, with antiseptic precautions, injuries to the brain can be inflicted with practical impunity. It is impossible to criticise the surgical after-treatment of the case until it has been laid before the profession in its entirety; but it is not absolutely out of the question that there may yet be some details in skull-wounds, which further familiarity therewith may teach us, entailing dangers that are avoidable. It is a great pity, under the circumstances, that the man died; but he lived long enough to establish the value of the operation.

Beyond its direct value to the profession, this case is a triumphant vindication of the value of careful experimentation upon the lower animals, and of the accuracy of those observations which have made Ferrier so well known. Without these for a map of the brain, it would be impossible to interpret the complex symptoms furnished by clinical observations. Without them, indeed, these last, however carefully collected and laboriously sifted and arranged, would have remained a mass of fragments which no genius probably could ever have cast into form. But by the light thrown on the brain and the functions of each part of it by experiments performed upon the brains of animals (which are clearly built upon the same plan as that of man) it is now possible to construct a correct diagnosis of what is going on in the brain beneath the bony skull. If Dr. Bennett could have made the coverings of the brain transparent,—nay, more, could he have peered into and seen through the cortical substance of the brain itself,—he could not have ascertained more than he did, or

been more accurate in his diagnosis than he actually was. Twenty years ago such a diagnosis was out of the question,—indeed, no one would have attempted it; and now no one is taken by surprise, and all take the case in a matter-of-fact way. We are already so familiar with the localization of function in the brain that, instead of any surprise, indeed, we receive the announcement of the novel procedure as something that we have been looking for, with the gratification, however, of having our anticipations realized for us and our faith corroborated. Fritsch and Hitzig, and still more my countryman, Ferrier, have not only mapped out the brain, but they have done much for suffering humanity.

The other matter which is exciting attention in the medical world here at the present time is that of a teaching university for London. Strange as it may appear, London has, until very recent times, had no university at all, and the one it possesses at present is merely an examining board. The information required has to be sought and gained somehow and somewhere; not promiscuously, however, but from certain recognized teachers. A man presenting himself for the M.B. of London has to furnish certificates of having attended sundry lecturers whose lectures are "recognized by the University of London." Logically it ought to be seen if he possesses the requisite knowledge when put to the test, but he ought to be allowed to acquire it as, where, and how he pleases, provided he has got it. Where the man who seeks his B.A. London has to get his lore is unknown to me, but he has to acquire a fair lot somewhere. From time to time attempts have been made to start a regular university in London, but so far the attempts have signally failed. It is very desirable, from the medical aspect of the subject, that such an institution should exist; at least so I think, as an old Edinburgh University man. Before a man can be chosen a Professor, he must at least have manifested some familiarity with the subject of which he has to treat; possibly, too, he may be required to have shown some capacity to impart knowledge, but this is quite a secondary affair. It is a well-recognized fact that some men cannot teach, while others can. The present Professor of the Institutes of Medicine in the University of Edinburgh is an instance of innate teaching-powers, and so also was his predecessor. On the other hand, the late Professor William Pulteney Allison, learned and wise as he was, had no knack of imparting knowledge, and even his work on "Pathology and Practice of Physic" is utterly unreadable by any one who is not perfectly familiar with the subject. But he fulfilled the first requisite in any degree,—viz., the possession of knowledge. The late John Goodsir, the famous anatomist, was as good an expounder and teacher as he was profoundly

versed in his subject. The professors of the University of Edinburgh were not only chosen men, but they gave complete courses of lectures. If a man attended the class regularly and took notes, he could pass in that subject without other reading, as many practically did. The student had no occasion for private tuition: he could have it if he pleased.

One matter was also recognized,—viz., that a student may learn from one man, but not from another. On this principle the University of Vienna has two professors on each subject, giving the student a choice. In Edinburgh this difficulty was met by allowing certain extra-mural lecturers whose lectures were recognized. But before each man got this recognition he had to do something to convince others of his fitness.

In London, unfortunately, things are very different. There are eleven teaching hospitals in London, each with a full staff of lecturers. Now, large as London undoubtedly is, it is possible to question whether the medical profession here could furnish eleven competent professors on each medical subject. Say medical jurisprudence, for instance. Are there eleven men competent to teach the subject fully? It is very doubtful. Yet there are at least eleven men who deliver lectures on the subject. I have had the curiosity to see of whom these eleven consist, and the less said on the subject the better as regards the list. Two, or perhaps three, have exhibited some special acquaintance with the subject, and two competent Professors of Medical Jurisprudence could certainly be found, but not eleven! Yet the lectures of these hospital-schools are recognized by examining bodies, one as much as the other.

But the teaching at the eleven institutions differs widely on each subject. At one school a certain subject is handled well, at another but indifferently, while with another subject the reverse occurs. Yet the student must take the lecturer as he stands, it being practically impossible (if not invidious) to attend that particular class at another school. If he can command the funds, he goes to some private teacher, who "grinds him up" on it. If he cannot afford to do this, he scrambles along as best he can. The number of schools in London is too great for the lecturers of each to be strong all round. Some are good, some are indifferent. If three sets could be rolled together and the best men picked out, then a competent lot could no doubt be found; and a very good thing this would be for all concerned. If there were four teaching hospitals instead of eleven, there would be far better courses of lectures delivered. Perhaps this would not be the opinion of all the present lecturers, but most would admit it. If there were only two lecturers or professors on each subject, it would be better still. A man then would be required to manifest some fitness for his vocation before entering upon it.

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As it is, at most of the schools, on many subjects a lecturer must be found when the man in office gets weary of it. How is this done? Either some junior has been working up the subject in the expectation of getting the lectureship, which is usually the case where the post is worth having, or, if the post be worth little, some man connected with the hospital is induced to fill the vacancy. He takes it to oblige his colleagues, in the hope of getting something more congenial to his tastes at a later day.

Looked at from this point of view, the selection of teachers in the Metropolitan schools is about as wretchedly irrational as any plan that fatuity could devise. It is a truly happy-go-lucky system; and inviting candidates to come forward for a vacant post and then letting them draw lots among themselves to decide the matter would be infinitely preferable, as more likely to secure a man both competent and willing to discharge its duties. That the present system is bad and undesirable is admitted, but the whole thing is too cumbrous to be readily dealt with. The plan of holding various lectureships in rotation is the potential worst. A man may have become quite competent to teach on one subject when the opportunity comes for his advancement, and a teacher of recognized capacity and complete fitness to teach pathology passes on from a place which he fills well to the chair of *materia medica* and therapeutics, for which he shows no special aptitude. Whether this is an advantage or otherwise to the school and all concerned, fortunately, it is not for me to pronounce judgment.

Then there is another aspect of this multiple teaching which is a very painful one to dwell upon. My information has come directly from the students themselves: if what I am going to say is untrue, I should be glad to know it. They complain that on several subjects at certain schools the lecturers are insufficient for the examination-table, and the student must get the desired information somewhere. If he is possessed of means, he can purchase it from some of the junior members of the staff who have private classes; if not, he must do as he can. If a teaching university of London would remove such a blot on medicine as this, and do away with such a scandal, it should be earnestly prayed for by all who wish the profession well. So far as medicine is concerned, a teaching university would be a boon.

J. MILNER FOTHERGILL.

ŒSOPHAGOTOMY FOR REMOVAL OF ARTIFICIAL TEETH.—At the Middlesex Hospital in London, last month, a patient was admitted who had swallowed a plate to which were fastened four front teeth. Mr. Lawson was obliged to remove it by opening the œsophagus below the cricoid cartilage. The patient is making a satisfactory recovery.

CHICAGO.

ACTINOMYCOSIS or not actinomycosis, that's the question which just now agitates several members of the profession residing here. Dr. Murphy claims to have had two cases of this rare disease in the course of a few months. To verify his diagnosis he called in aid Dr. Fenger, Dr. Belfield, and others, and they finally agreed that the cases were strongly characteristic of the disease. Doubters have been by no means wanting, and several claim that the cases were nothing more than simple abscess. A few of the unconvinced state that they had opportunity for microscopical examination under as favorable circumstances as those enjoyed by others.

The paper read by Dr. Murphy before the Chicago Medical Society gave an interesting account of his cases, but there was wanting that clinching argument, ocular demonstration. The only slide shown prepared from the contents of the tumor in one case failed to show the actinomycetes.

The discussion which followed showed that the minds of many present were not satisfied, notwithstanding that the reporter had seen the fungus in specimens prepared from his cases. The Chicago correspondent of the *Boston Medical and Surgical Journal* has taken up the defence of those claiming the genuineness of the disease in these two cases. The editor of the *Medical Review* has taken strong ground in opposition, and a warm discussion is likely to pass through at least two or three of the journals.

The biennial reports of our hospitals for the insane have been issued, and show the same dearth of interesting information. The reports of the commissioners consist of little more than a statement of expenditure and an estimate of needs for the future. The medical superintendents give a brief statement of general condition of patients. Altogether, these pamphlets form a striking contrast to the reports issued by some of the English asylums.

It would appear that our institutions for the insane are making very slow progress in the systematic study of this class of diseases. Instead of giving, as one of the reporters does, a tabulated statement showing the rapid reduction of alcoholic stimulants consumed by patients to a quantity that barely permits of their use at all, why has he not given some information as regards the use of hypnotics and narcotics? The statement is made that mechanical restraint has been reduced to a minimum, and that certain forms have been abolished,—i.e., "the muff;" but the writer goes on to say that the leather "mittens" are occasionally used, the difference being little more than in name. And again he says, "We have discarded the use of the camisole as barbarous, but the 'continuous sleeve' is sometimes used." This is another fine distinction. The reporter begins:

"The insane have certain rights, among which is the right to be protected from self-injury while under the influence of suicidal impulses, and to be restrained from injuring others during attacks of homicidal mania or while under the influence of impulses to destroy clothing and other property." This is merely an argument for the perpetuation of mechanical restraint, and is not a justification. Where the use of this form of restraint ends and its abuse begins it is difficult to say. We know that in some English institutions it has been entirely done away with, and there is no reason why it might not be as radically treated as is the reduction of alcoholics. The mere enumeration of the varieties of mechanical restraint in use in some of our State institutions is sufficient to show how hard it is for our medical superintendents to radically reform this abuse. The portion of the report treating of employment for the insane is not new; nevertheless it is good, and were it properly put in practice it would probably facilitate the placing of our hospitals for the insane upon that higher plane where now stand the English institutions as regards mechanical restraint. The pathology of insanity has not as yet received any valuable additions from our institutions, nor is it likely to in the immediate future, if one may judge from present appearances.

On the morning of the 19th instant an important part of the Northern Hospital for the Insane at Kankakee was destroyed by fire, seventeen patients being consumed in the flames. To faulty construction and want of means for controlling fire, at least in part, this terrible disaster may be charged.

The readers of the *Chicago Medical Journal and Examiner* will regret to learn of the retirement of Dr. James Nevins Hyde from the position of editor-in-chief.

The health of the city has been fairly good during the early part of the winter. Typhoid fever has prevailed to an increased extent in some sections. M.

CHICAGO, January 20, 1885.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

ANUAL meeting, January 15, 1885, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Before proceeding to the scientific business of the evening, the annual reports of officers were read and officers elected, among others Dr. A. JACOBI for President and Dr. C. C. LEE for Vice-President.

THE COMMA-BACILLUS.

Dr. E. C. WENDT made a few remarks regarding the relation of the comma-bacillus

to Asiatic cholera, and exhibited some specimens of the microbe received from Dr. Koch.

AN OBSTETRIC FORCEPS AND A VAGINAL SPECULUM

were presented by Dr. W. D. SCHUYLER, who briefly explained the advantages of the instruments, that of the forceps relating to the short cephalic and marked pelvic curves. For a full description of the forceps he referred to the *New York Medical Journal*, March 4, 1884, and of the speculum, to the same journal, September, 1876.

Dr. F. A. CASTLE called attention to the fact that the instrument-makers had so modified the shape of Nott's speculum that the principles upon which the original instrument was constructed could no longer be recognized.

DISEASES OF FALLOPIAN TUBES; THEIR RELATIONS TO UTERINE DISPLACEMENTS AND THE USE OF PESSARIES.

Dr. W. GILL WYLIE read a paper with this title. Since May, 1883, he had operated in fourteen cases for disease of the Fallopian tubes,—in nine cases in Bellevue Hospital, and in five in private practice. Twelve patients recovered; two died of septicæmia on the fifth day after the operation. Eight were cases of pyo-salpinx, two of hydro-salpinx, and four of catarrh of the tubes with peritoneal adhesions. With one or two exceptions, there were extensive adhesions, local peritonitis, and the ovaries were either diseased or more or less covered with adhesions. Short histories were given of fourteen of the cases, and twelve specimens presented, together with the report of the microscopist, Dr. H. C. Coe, at the New York Pathological Society, January 14.

On account of the lateness of the hour, Dr. Wylie read only some of the more important points in his paper. With regard to the etiology, he said that anything which can cause endometritis may also induce disease of the Fallopian tubes, and it is probable that most cases of salpingitis were due to direct extension of disease from the lining membrane of the uterus to that of the tube. In virgins salpingitis is comparatively rare, except from catarrhal disease. In the imperfectly developed and delicate the mucous membrane of the uterus is an easy prey to catarrhal disease, which may extend up into the tubes. Tubercular disease might also attack the Fallopian tubes. Many of the medical profession look upon gonorrhœa in women as a very trivial disease, probably because, unlike in the male, it does not cause urethral constriction. There can be no doubt that gonorrhœa is a very frequent, and in many instances an unsuspected, cause of salpingitis. When once it enters the uterus it cannot be safely treated locally until after it has become subacute, because of the danger of causing

localized peritonitis. Specific endometritis will in many instances, although treated with the greatest care, cause salpingitis and local peritonitis. It may end in pyo-salpinx, but usually the tube becomes distended from constriction of the proximal extremity, and the poison is liable to extend to the surrounding tissues. Syphilis might cause salpingitis, as it does otitis and ozæna. Septic poisons after abortion or labor are frequent causes of salpingitis; and obstructed effete matter within the uterus may be forced into the tubes by contraction of the uterine fibres.

Local peritonitis is much more common upon the posterior than upon the anterior surface of the broad ligaments, because the tubes open upon the posterior surface. His experience led him to attach much more importance to local peritonitis than to local cellulitis: indeed, he did not believe in so-called chronic cellulitis.

Diseased tubes are very commonly associated with diseased ovaries, and in most instances the disease of the tubes precedes that of the ovaries. When there is ovaritis, it may be regarded as due to extension of disease from the tubes and peritoneum. There are, however, certain diseases of the ovaries, as cancer, which may cause secondary disease of the tubes. In hystero-epilepsy and hysteria he expected to find a cystic or atrophied ovary following catarrh of the tubes. Hemorrhage into the tubes, and the presence of other fluids, may cause more or less permanent distention.

The subjective symptoms are so varied, and salpingitis is so frequently associated with uterine diseases, that it is often overlooked or not distinctly made out. The most important subjective symptom was pain in the iliac region, which is more marked in pyo-salpinx than in hydro-salpinx or catarrh of the tubes. Pyo-salpinx, especially if accompanied by abscess around the tube, causes marked local pain and, usually, more or less tenderness.

The objective symptoms up to a recent date were regarded as only imperfectly clearing up the diagnosis, but Dr. Wylie thought that by allowing an acute case to become more or less subacute, and then introducing cotton pledgets containing glycerin and alum around the cervix two or three times a week, within from three to six weeks the condition of the parts would have become so changed as to permit of a positive diagnosis in almost every case in which there was disease of the tubes or ovaries, especially if the patient were examined under ether.

With regard to the pathology, an accurate account of it is scarcely to be found except in the German. The difference in the shape, size, and position of the mucous canal of the Fallopian tube and that of the uterus causes a marked difference in the result of the same disease in the two localities. Inflammation

of the endometrium, producing enlargement of the uterus, may of itself cause displacement, imperfect drainage, and parametritis, but this is not the rule. Moreover, the uterus is accessible and amenable to local treatment, whereas a like inflammation of the lining membrane of the tube is not accessible, is almost certain to result in prolapsus of the tube, obstruction of the inlet causing imperfect drainage, and peri-salpingitis from emptying of the contents into the peritoneum. Salpingitis nearly always becomes chronic, in many instances lasting as long as the patient. The first effect of the disease reaching the tube is to cause it to become engorged with blood, to sink lower in the pelvis, and, as salpingitis is nearly always associated with an enlarged uterus, this organ also will sink, and, as the patient in the acute stage lies upon the back, the fundus is thrown backward by gravity, the peritoneum becomes inflamed, lymph is thrown out and glues the different organs together, and, as the acute stage subsides, draws them out of their normal position; the twisted broad ligament then holds the uterus in the position of retroversion. The organ may sink lower, being drawn down by contracting adhesions, and perhaps become retroflexed. The tubes, contracting, may also become strong cords, binding the uterus firmly in the position of retroversion. This fixation of the tissues may be so marked that any attempt to lift the uterus and hold it up by pessaries would cause rupture of the tube and emptying of its septic or irritating contents into the peritoneal cavity. By proper treatment in time we might be able to replace the fundus, but to keep it replaced is the greatest difficulty. If but one tube were affected, the retroversion would be less marked, and the organ might be drawn toward the affected side. When but one side is the seat of disease, it is usually the left.

The character of the fluid contained within the tubes varies; it may be transparent water, milky, thick, greenish, or broken-down pus. In the majority of his cases the tubes are infiltrated with pus and serum, and in some instances the tissues become so rotten that the ligatures cut through the degenerated stump. In some the tissues were not sufficiently contracted to enable the ligature easily to grasp the stump. The most common affection of the ovary, if it were diseased at all, is cystic degeneration. Superficial cysts with thin fluid are commonly found, but deep-seated, central cysts might fairly be called degeneration, and it was to these that he referred in speaking of cystic degeneration of the ovaries.

Treatment.—In cases in which there are adhesions and we are not allowed to operate, he would not resort to the use of pessaries, hoping to replace the uterus and keep it there by such supports; he would be satisfied if he could render the uterus movable, and thus

improve the whole general circulation of the pelvic organs, thereby giving the patient more relief than if any attempt had been made to employ pessaries. He had succeeded in tapping in two or three cases in which he was not allowed to operate, and in one of the cases a cure was effected. But it was believed that the enlargement was an abscess formed in an old hæmatocele. The other two patients were benefited, but not cured. When disease of the tubes can be clearly recognized, the patient is bedridden; complete removal of the tubes and ovaries alone would give relief.

In the operation, the abdominal opening should not ordinarily be made greater than the width of the three fingers, admitting only two,—thus guarding against ventral hernia. It is important for the same reason, in closing the wound, to obtain perfect apposition of the fascia as well as of the peritoneal surfaces. He usually gives the patients pancreatized milk during the four or five days preceding the operation, to guard against distention of the gut from gas. If the omentum appear to be formidably adherent, by passing two fingers down through the opening and moving them from side to side, one would be enabled easily to tear away the adhesions. It might, however, be necessary in some cases to tie the omentum below and above and cut a part away. In order to get at the ovary directly and to obtain a suitable pedicle, the broad ligaments should be unrolled.

Dr. E. NOEGGERATH was asked to open the discussion. He repeated what had been stated at the last meeting of the International Medical Congress, that to call this Tait's operation was a misnomer, for Hegar had performed the operation in forty-two cases before Tait's experience was known. Regarding gonorrhœa as a cause of salpingitis, he had made special studies in Berlin to establish the gonococcus, but the gonococcus was a diplococcus, and no gelatin had been obtained in which it could be raised beyond the second or third generation. If dislocation of the uterus was to be considered the result of salpingitis and peritonitis, he would have to repeat what he said in 1872, that the form of dislocation was latero-version combined with anteversion. He did not doubt that Dr. Wylie had seen cases in which a sufficient amount of plastic material had been thrown out to carry the uterus backward, but such cases were exceptions. In ninety per cent. of the cases of retroversion he thought the uterus could be replaced and kept there by instruments, and the cases in which we could not replace it because of posterior adhesions were very rare. In other words, a large percentage of retroversions are not accompanied by adhesions.

As to the diagnosis of salpingitis, those cases in which there is ordinary salpingitis with very slight exudation should be considered

apart from those in which there was salpingitis in its later stage, pyo- or hydro-salpinx already present. In the first place, it is not necessary to feel the tubes at all in order to make a diagnosis. If there is perimetritis with catarrh, with minute condylomata about the hymen and labia minora, we know that there is also salpingitis, because the cases in which perimetritis exists without salpingitis are extremely rare.

With regard to the surgical diagnosis in case an operation were proposed, it is the shape of the tumor that is of the greatest importance. The tumor of salpingitis is very often not single, but divided into two or three sections, having the shape of a cone running in the direction of the lateral diameter of the pelvis. He believed, with Dr. Wylie, that in the extreme cases referred to no treatment other than an operation would prove successful. But the large majority of cases of salpingitis are not ready for an operation, and something else must be done. The treatment here would be very much like that described by the author of the paper; but that which he had found most efficient was the use of the waters of Franzensbad, of Bohemia.

Dr. A. J. C. SKENE said that, so far as his observation went, it is rare to see disease of the Fallopian tubes not preceded by gonorrhoea. But he differed from Dr. Noeggerath in his statement that we rarely see pelvic peritonitis without disease of the tubes.

In the diagnosis the practical difficulty seemed to him to be to distinguish between a small ovarian cyst more or less prolapsed and pyo- or hydro-salpinx. He would inquire what might be the value of aspiration in diagnosis. If we find ciliated epithelium so generally present in pyo- and hydro-salpinx, what objection could there be to the removal of a portion of the fluid and examining it for diagnostic purposes? Out of twenty-one specimens which he had examined, eighteen contained ciliated epithelial cells, indicating that this condition was present.

As to treatment, it had been well remarked that many patients are operated upon before other means had been exhausted. He thought that if a hydro-salpinx were aspirated the fluid might not reaccumulate, and the patient would recover.

Dr. P. F. MUNDÉ said that since he had begun the study of this subject, some years ago, the greatest difficulty which he had met was in the diagnosis of these cases of salpingitis. The cases which most require an operation, the cases in which the swelling in the pelvic cavity consists of a diffuse fulness, he had always found the most difficult of diagnosis. He doubted whether we should be able to make a *positive* diagnosis until after laparotomy had been performed. As regards the influence of inflammation of the tubes upon displacement of the uterus, he was disposed to agree with Dr. Noeggerath in his views

of lateral displacements and some anterior displacements; but he had also seen some cases in which the uterus was retroverted, bound down, and accompanied by marked salpingitis. He was rather disposed to think that they are as common as lateral and more common than anterior displacements. He agreed with Dr. Noeggerath that in the majority of cases of retroversion the uterus is not adherent. So far as treatment was concerned other than laparotomy, he thought we can do but very little. There had been certain cases of diffuse swelling in which he had given the patient relief from pain by means of the galvanic battery.

Dr. WYLIE, in closing the discussion, said he was satisfied that if Dr. Mundé would adopt his preparatory treatment he would also be able to map out the exact condition of the pelvic organs in cases of salpingitis, and so decide as to the necessity of an operation. As to treatment by aspiration, he thought it would require more than a withdrawal of the fluid to effect a cure: it would also be necessary to have perfect drainage. In cases demanding an operation he thought the rule not to tap any abdominal tumor in a case in which it was intended to perform laparotomy should be observed. With regard to retroversion associated with salpingitis, his experience had been that in women who had never borne children lateral version or anterior version is common, but in the majority of cases of women who have borne children there is retroversion, and especially so if the salpingitis be due to septic endometritis extending to the tubes.

STATE BOARD OF MEDICAL EXAMINERS.

Dr. C. C. LEE, Chairman of the Committee on Education, reported that, after a full and careful consideration of the resolutions (on proposed State Board of Medical Examiners) referred to it at the last meeting of the Academy, the committee deems it inexpedient for the Academy of Medicine to take any action at present in regard to the establishment of a State Board of Examiners for the granting of license to practitioners of medicine in this State. The report was accepted.

Dr. F. R. STURGIS made some remarks upon the importance of having the licensing power to practise medicine separate from the teaching power, and asked that the Academy adopt resolutions expressing its belief that the best interests of the public and medical profession would be served by the passage by the Legislature of a bill appointing a State Board of Examiners, and that its delegates to the State Society be instructed to support the passage of such a bill.

After some remarks by Dr. Roosa, Dr. Hanks, and the President, Dr. Sturgis consented to laying the resolutions on the table at present, expecting that they would be acted upon at a future meeting.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, January 8, 1885.

The President, Dr. SHAKESPEARE, in the chair.

A NUMBER of specimens were exhibited at the opening of the meeting.

Primary tumor of the liver in a child nine months old.

Aortic valvular disease with rupture of one of the leaflets.

Malignant tumor of the kidney.

A large renal cyst. The foregoing were all presented by Dr. SHAKESPEARE.*

Sarcoma of the clavicle. Presented by Dr. G. E. DE SCHWEINITZ.

This specimen was sent to me by Dr. John Ashhurst for microscopical examination, and he kindly gives me permission to exhibit it to-night. The tumor occurred in the person of a young girl, S. L. B., aged 16, who came to him for treatment last August. She was a somewhat frail-looking, clear-skinned blonde, whose general health up to the time of the appearance of the growth had been satisfactory. The family history was good; none of the other five children composing the family presented any similar affection, nor was there any history of tumor for two generations back. The tumor began at the left sterno-clavicular joint as a small nut-shaped swelling, having arisen without known inflammatory or traumatic origin, although, as the father stated, they always believed that the patient had in some way and unknown to herself received an injury at this point. The growth of the tumor was rapid, and at the end of five months stood out as a prominent swelling, as large as an orange, occupying the inner two-thirds of the clavicle, and was covered by somewhat reddened and thinned skin. Pain, although not constant, was at times a very severe symptom. On the 7th of last August Prof. Ashhurst removed the growth, together with the inner two-thirds or three-fourths of the clavicle. Examination of the gross specimen shows it to be a spindle-shaped growth, about four inches long, three inches at its greatest breadth, and two inches deep, which has taken its origin in the medullary cavity of the bone gradually, and become surrounded by a firm fibrous or periosteous capsule. The true tumor-tissue is of moderate consistence and reddish-brown color. Microscopic examination reveals the following points of interest. The capsule is composed of dense fibrous tissue, from which prolongations pass, dividing the tumor into numerous spaces which are filled with small round sarcoma-cells. These spaces

are in many places again divided by a delicate spindle-shaped tissue into small alveoli. In addition to the round cells, spindle-shaped cells are also seen in spots; giant-cells are absent, or at least only a few multinucleated cells, relegated to the regions of the spindle-cells, are noted. The tumor, I think, should be classified as a small round-celled sarcoma, with an alveolar arrangement. If this tumor be accepted as a variety of alveolar sarcoma, it is somewhat unusual. Twice before specimens of alveolar sarcomata of the long bones have been exhibited to this Society,—one of the femur, by Dr. Nancrede, and one of the knee-joint, by Dr. Formad. At that time Dr. Formad thought the variety of the sarcoma justified a rather more favorable prognosis than usual, while Dr. S. W. Gross, during the discussion, after referring to the somewhat unusual microscopical character of the tumor, thought the outlook for the patient was bad, as this variety of sarcoma is peculiarly fatal. Dr. Formad's prognosis was correct, because in that instance the patient was alive and well, if I am not mistaken, for some time after the operation, and may be now, for aught that I know. In regard to the result of the present case, I am able to speak quite definitely. Although the operation was successful and the removal of the growth quite complete, the hemorrhage insignificant, and the recovery of the patient satisfactory, in about two months after the operation the growth reappeared either in the old wound or about two ribs lower. In this case, then, the truth of Dr. S. W. Gross's remarks have been only too thoroughly proved.

Dr. SHAKESPEARE said that this specimen was of interest on account of the rarity with which similar ones had been presented to this Society. Through the kindness of Dr. De Schweinitz he had the opportunity of examining sections from the growth, and he thoroughly agreed with the exhibitor as to its nature.

Dr. SIMES had also examined microscopic sections, and endorsed the statements made by the preceding speaker.

Alveolar sarcoma of the kidney. Presented by Dr. M. LONGSTRETH.

The patient, J. E., *et. 9* months, was first under the care of Dr. McOscar,—to whom I am indebted for the specimens and this history,—suffering from an attack of summer-complaint. The patient was at that time three months old, and had been ill for a week or two. He was in a state of great emaciation, and, upon examination of the abdomen, a swelling was found in the right flank. The little patient recovered from the bowel-trouble, but the general condition did not materially improve. During the remaining six months of life the child was only occasionally under observation, and at those times suffered from paroxysms of pain, apparently in connection

* The notes of the above cases have been withheld for future publication, and, in consequence, the interesting discussion upon them, in conjunction with the case presented by Dr. M. Longstreth, must also for the present remain unpublished.—RECORDER.

with the tumor. The bulk of the tumor, as felt through the abdominal wall, did not seem to increase greatly up to his death. The urine was not carefully inspected. Three days before death the pain increased to great violence, and in this condition death came. The post-mortem examination showed the enlarged right kidney more firmly adherent to the posterior abdominal wall and to the ascending colon and mesentery, as well as portions of the small intestine attached to its anterior surface. The diseased organ weighed fifty-two ounces, and presented itself as a rounded, slightly oval mass, regular in outline, smooth of surface, and with a moderately firm, elastic consistence. The capsular surface was pretty dense, of shining whiteness, with conspicuous small vessels passing over it. On section—which measured three and one-half inches by three inches in the two diameters—the tissue presented a very varied appearance. In parts it was of a dense white, perfectly homogeneous aspect; in others, the pinkish-white mass showed streaks of yellow, with numerous small spots of red, and there were also large blood-red areas. In other parts the tissue was breaking down into cysts, of which several large ones were present, the largest of the size of an English walnut. The cysts were all situated on the periphery of the mass, but they did not cause any protrusion of the capsule. At the upper extremity of the mass there was found a portion of kidney-tissue not invaded by the new formation. On section, this portion occupied about half an inch of the long diameter of the mass, and was seen to be separated from the new growth by a thin partition of connective tissue; externally it showed itself like a lobule of kidney, fitting like a cap on the spherical tumor, as does the suprarenal capsule on the kidney itself. The microscopical examination showed the new formation to be a small round-celled sarcoma. The greater portion of all sections presented cells nearly rounded in figure, embedded in a perfectly homogeneous basis-substance. The uniform area of cells was, however, interrupted by streaks of spindle-cells, running in narrow bands, enclosing greater or less areas of round-cell tissue. These circumscribing bands of spindle-cells sometimes formed circular areas looking like the cross-section of a tube; in other places the bands pursued a very tortuous course, resembling the outline of a twisting, undulating tube cut in a longitudinal direction. The bands of spindle-cells were never of great breadth, rarely more than four or five spindles. The spindle-cells were not regularly or closely fitted, but were embedded, like the round-cell elements, in a homogeneous basis-substance. In the spindle-cell bands there were occasionally seen fine capillaries filled with red blood-corpuscles, which sometimes ran along for a considerable length; many other capillaries were seen cut

transversely or obliquely, also in the spindle-cell tissue many areas of hemorrhage were visible. In many places a scanty fibrillar tissue, with various-shaped nuclei, oval, angular, and spindle, was seen. This tissue was thrust in and filled the interstices between the areas of round cells circumscribed by the spindle-cell tissue. Thus, in the section one passed from areas of round cells to the narrow bands of circumscribing spindles, and then into fibrillar tissue with open meshes, apparently without any intercellular basis-substance. The whole picture resembled the cortical portion of the kidney, transformed by the presence of a new growth; the lumina of the convoluted tubes, greatly enlarged, were filled with a round-celled homogeneous basis-substance tissue, the base-membrane of tubes transformed into spindle-cell bands, and finally areas of hyperplastic, intertubular connective tissue, in which, or along the basement-membrane of the tubes (spindle-cell bands), ran the intertubular capillaries. The left kidney weighed five ounces. On section, it presented a normal aspect; the capsule separated easily, was not thickened, and the surface of the kidney remained smooth. The microscope showed no alteration of its tissues. The liver was large, smooth, blunted, pale; under the microscope a very high degree of fatty infiltration was found. The other organs showed nothing especial to note. No secondary new formations were found.

NEW YORK PATHOLOGICAL SOCIETY.

ANNUAL MEETING, JANUARY 14, 1885.

The President, GEORGE F. SHRADY, M.D., in the chair.

FOURTEEN CASES OF TAIT'S OPERATION.

DR. W. GILL WYLIE presented twelve specimens, and related the histories of fourteen cases in which he had performed laparotomy for the removal of the tubes and ovaries for salpingitis. The histories were accompanied by the report of the microscopist, Dr. H. C. Coe. The cases formed the basis of a paper on "Diseases of the Fallopian Tubes; Their Relations to Uterine Displacements and the Use of Pessaries," an account of which will be found in our report of the New York Academy of Medicine meeting of January 15 (see page 362).

Dr. JOHN A. WYETH presented a patient showing the result of an operation upon the lower jaw, reported at the last meeting. He also briefly referred to a case in which he performed an operation upon the jaw after anæsthetizing the parts by hydrochlorate of cocaine. The patient felt no pain whatever during the continuance of the operation.

Among the officers elected for the ensuing year were Dr. John A. Wyeth for President and Dr. George F. Peabody for Vice-President.

PHILADELPHIA CLINICAL SOCIETY.

AT a stated meeting held December 26, 1884, Dr. HENRY BEATES, Jr., in the chair, Dr. JAS. B. WALKER reported a case of "Ulcer of the Stomach." (See page 348.)

DISCUSSION.

Dr. A. V. SCOTT had used rectal alimentation in a similar case with success. Cinchonidia sulph., in twenty-grain doses, was given with the food.

Dr. E. E. MONTGOMERY did not hear the whole report of the case, but was reminded by the concluding remarks of two cases seen the previous year. The first was an old gentleman suffering with gastric catarrh and gastralgia, the latter appearing both before and after meals. Under rigid diet the pain after food-ingestion was controlled, but that occurring during the empty condition was not lessened. Food was taken frequently. After several months of suffering, the patient was carried off by an attack of pleuro-pneumonia. The post-mortem appearances indicated commencing carcinoma. The kidneys were not granular.

The other case was confined to bed six months with constant vomiting of food in a sour condition. All food was rejected with impartiality. Dr. Bartholow, being called in consultation, found evidences of specific lesions, which had been denied by the patient. After using mercurials in vain, however, another consultation developed the suspicion that we had a case of hysterical vomiting to deal with, and under appropriate treatment the patient quickly recovered.

Dr. L. BREWER HALL desired to bear testimony to the value of turpentine in hemorrhage of the stomach. The good results of its use are immediate, and it is also of value in pulmonary hemorrhages. The oil of erigeron may be used instead, and is more acceptable to the taste.

Dr. HENRY BEATES, JR., asked Dr. Walker if he still looked upon the micaceous appearances of the skin as an evidence of carcinoma, and, if so, if it would not have been of service in the diagnosis of one of the cases related.

Dr. WALKER, in closing the discussion, said he had seen but two cases with the micaceous skin which were not carcinomatous, one being a case of pernicious anæmia. He looked upon it as only confirmatory. The use of oil of erigeron as a pleasant substitute for turpentine as a hæmostatic was suggested by the late Dr. Geo. B. Wood, but the accuracy of taste of the suggester was doubted. The speaker had taken a dose of it on a patient's complaint several years ago, and had not recovered from it yet.

In the cases simulating gastric ulcer the resemblance is interesting. The ejecta are more frequently sweet than acid in such cases. In unsuspected cases of carcinoma

in plethoric subjects the peculiar appearance of the skin alluded to may be the only indication present of the real nature of the case.

As regards Dr. Scott's case, the course pursued seemed to embody all that was necessary. Total rest of the affected organ is generally sufficient. The bismuth may be useful.

AT the stated meeting held January 23, 1885, the annual election of officers resulted as follows:

President, Dr. Edward E. Montgomery.
First Vice-President, Dr. John B. Roberts.
Second Vice-President, Dr. Amy S. Barton.
Corresponding Secretary, Dr. Ida E. Richardson.

Recording Secretary, Dr. I. G. Heilman.
Reporting Secretary, Dr. Mary Willits.
Treasurer, Dr. L. Brewer Hall.
Councillors, Dr. James B. Walker, Dr. Daniel Longaker, Dr. Clara Marshall, Dr. Henry Beates, Dr. Henry Leffmann.

REVIEWS AND BOOK NOTICES.

A SYSTEM OF PRACTICAL MEDICINE BY AMERICAN AUTHORS. Edited by WILLIAM PEPPER, M.D.; assisted by LOUIS STARR, M.D. Vol. I.—PATHOLOGY AND GENERAL DISEASES. Philadelphia, Lea, Brothers & Co., 1885. For sale by subscription only. 8vo. Cloth, \$5.00; leather, \$6.00; half Russia, \$7.00.

It is with pleasure that we notice the appearance of the first volume of "A System of Practical Medicine by American Authors," under the able editorship of the distinguished Professor of Theory and Practice and of Clinical Medicine in the University of Pennsylvania. The selection of authors has been judiciously restricted to American physicians of acknowledged ability, not ignoring the importance of the study of special subjects by European investigators, to which full justice is done and of which due acknowledgment is made, but because it was felt that a proper time had arrived for the presentation of the whole field of medicine as it is actually taught and practised by its best representatives in this country. The publication of a work of such character and aim deserves especial notice by the profession, and it may almost be said to mark an epoch in American medicine. In reply to the query, Who reads an American book? we may answer, "Everybody, but particularly Americans."

The design of the work is comprehensive: it will be completed in five volumes, discussing the usual topics of internal medicine, including gynæcology and other special departments, containing about eleven hundred pages each, with illustrations. The next two volumes will appear at intervals of about four months.

The volume before us contains the following articles:

General Morbid Processes, by Reginald H. Fitz, M.D.; *General Etiology, Medical Diagnosis, and Prognosis*, by Henry Hartshorne, M.D., LL.D.; *Hygiene*, by John S. Billings, A.M., M.D., LL.D. (Edin.); *Drainage and Sewerage in their Hygienic Relations*, by Geo. E. Waring, Jr., M. Inst. C. E.; *Simple Continued Fever, Typhoid Fever, Typhus Fever*, by James H. Hutchinson, M.D.; *Relapsing Fever*, by William Pepper, M.D., LL.D.; *Variola*, by James Nevins Hyde, M.D.; *Vaccinia*, by Frank P. Foster, M.D.; *Varicella*, by James Nevins Hyde, M.D.; *Scarlet Fever*, by J. Lewis Smith, M.D.; *Rubeola, Rotheln*, by W. A. Hardaway, A.M., M.D.; *Malarial Fevers*, by Samuel M. Bemiss, M.D.; *Parotitis*, by John M. Keating, M.D.; *Erysipelas*, by James Nevins Hyde, M.D.; *Yellow Fever*, by Samuel M. Bemiss, M.D.; *Diphtheria*, by Abraham Jacoby, M.D.; *Cholera*, by Alfred Stillé, M.D., LL.D.; *Plague*, by James C. Wilson, A.M., M.D.; *Leprosy*, by James C. White, M.D.; *Epidemic Cerebro-Spinal Meningitis*, by A. Stillé, M.D., LL.D.; *Pertussis*, by John M. Keating, M.D.; *Influenza*, by James C. Wilson, A.M., M.D.; *Dengue*, by H. D. Schmidt, M.D.; *Rabies and Hydrophobia, Glanders and Farcy, Anthrax (Malignant Pustule)*, by James Law, F.R.C.V.S.; *Pyæmia and Septicæmia*, by B. A. Watson, A.M., M.D.; *Puerperal Fever*, by William T. Lusk, M.D.; and *Beriberi*, by Duane B. Simmons, M.D.

After a careful examination of its pages, it may be said, as a criticism upon the work, that it has been ably conceived, and thus far has been admirably executed; it is also worthy of note that the press-work and binding are exceptionally good, and in keeping with the high character of the contents. Everywhere through its pages are found references to current medical literature, both indigenous and foreign, showing that the authors are fully abreast of modern progress, and have contributed to make this System truly representative not so much of American medicine as it is of modern medical science as understood and taught by American authors.

THE STORY OF MY LIFE. By J. MARION SIMS, M.D., LL.D. Edited by his Son, H. MARION SIMS, M.D. New York, D. Appleton & Co., 1884. 12mo, cloth, pp. 471. \$1.50.

Autobiographies usually tell both too little and too much; they tell too little of what we desire to know of the man himself, and communicate some things that we do not care to hear. This charge can be made with less truth about this volume than about most of such publications. In a simple, unaffected style the eminent author lays before us an account of his early difficulties, his school-days, his

courtship, his struggles with adversity and ill health, his discoveries, and, finally, his crowning success in life,—the organization of the Woman's Hospital, New York, which remains a perpetual monument to his skill, his energy, and his industry. The career of Marion Sims, told in graceful language which at times is pathetic, shows how a great mind,—though hampered by obscurity of birth, a delicate physical frame, frequent sickness, adversity and misfortune,—conquering every obstacle, can finally rise superior to them all. He attributes all his after-achievements to his early principles of honesty, industry, and a determination to succeed. This, with directness of purpose and an untiring sleuth-hound sort of persistency in following an idea to its logical and practical conclusion, enabled him to develop step by step as his life-work gradually opened before him, until he became, in his department of surgery, the leading man of his day. The references to his relations with contemporaneous physicians of New York, England, and France are not the least interesting part of the book.

Dr. Sims was a warm-hearted man, who feared God and loved his family and was true to his friends. His letters to his wife contained in the Appendix reveal his tenderness and his regard for her and their children in a very touching manner; but it seems like prying into the private correspondence of a friend, and almost makes one feel, in reading them, as if doing a mean or dishonorable thing. Among the last words which he wrote were those in which he ascribed his happiness, not to his successful career as a surgeon, but to his congenial home-life. After describing the great unhappiness of Trousseau, due to the conduct of his family, he declares, "We are happy in this life as our children choose to make us. The joys, amenities, and pleasures of home, with health, make life worth living. But these must abound and be enjoyed by all who come in contact with us. We must not only be happy in our own homes, but must do all the good we can outside of these, and try to make others happy too."

This life-story, we hope, will be read and enjoyed by our readers for themselves. It is full of encouragement and healthy stimulus to increased activity in professional work, and indicates the way to true success in life.

GLEANINGS FROM EXCHANGES.

DR. KOCH AND HIS CRITICS.—Dr. Koch has published a reply to some of the objections which have been raised by his statement that he has "discovered the cause of cholera" in the so-called "comma-bacillus." Dr. Koch endeavors to deal with the objections of those who point to the fact that he is false to the principles laid down by himself, in

so many words, at an earlier period of his career as a bacteriologist. Dr. Koch *formerly* stated (and all men of a scientific habit of mind must agree with that statement) that no micro-organism could be justly declared to be the cause of a disease until the organism had been "putely cultivated" and the disease had been produced by the inoculation of a healthy animal with this "pure culture." Dr. Koch *now* calls those persons who hold this reasonable doctrine "sceptics," and in a somewhat flippant manner states that he hopes to convince them by experiments which he is *now* (too late!) conducting similar to those of Professors Reitsch and Nikati.

It is too late for Dr. Koch to convince any true scientific sceptic. The man who has rashly committed himself to such public assertions with regard to the cause of a phenomenon cannot be subsequently accepted as a witness in his own favor. As soon as Dr. Koch publicly declared on insufficient data that he had discovered the comma-bacillus as the cause of cholera, and without any reserve insisted on using his authority and position to force upon the public a mere hypothesis as though it were a demonstrated or even a highly probable conclusion, then and there Dr. Koch put himself out of court as a witness of new facts in support of his contention. Others may produce the record of experiments in order to establish Dr. Koch's hypothesis, but he himself is so terribly involved in the issue that we cannot accept his judgment on such delicate experiments as those which he now is anxious to quote in favor of his view. *Vestigia nulla retrorsum!*

In reply to Dr. T. R. Lewis, Dr. Koch apparently wishes us to believe that he knew all along of the common occurrence of "comma-bacilli" in the mouths of healthy human beings. It is difficult to believe that Dr. Koch would not previously have mentioned these normal comma-bacilli and have pointed out how they differ (if they do differ) from the cholera comma-bacilli had he been acquainted with them. Dr. Koch states that the normal comma-bacilli of the mouth differ from those of cholera in regard to the conditions favorable to their artificial cultivation. *When* did he discover this? He reproaches Dr. Lewis with not having made such artificial cultivations. *When* did Dr. Koch make such cultivations of the comma-bacilli of the mouth himself? Surely it was *his* business to show that the hypothetical cholera comma-bacillus was distinct from the closely similar comma-bacillus of the mouth. Yet we find no allusion whatever to the comma-bacilli of the mouth in Dr. Koch's reports or in the address to the Special Medical Congress in Berlin. Either Dr. Koch did not know of the existence of the comma-bacilli of the mouth or he suppressed all mention of them when he endeavored to obtain credence for his

extraordinary assumption that a comma-bacillus is the cause of cholera.

There will be no difficulty in producing experiments *now* which will seem to prove that the cholera-comma and the normal mouth-comma behave differently. It will not be difficult to produce symptoms like those of cholera by injecting cholera-commas into guinea-pigs or rabbits. This kind of experiment is so delicate that it may easily be allowed to take a course favorable to the views of a prejudiced experimenter. That is the pity of it. Dr. Koch has sacrificed for a momentary notoriety the irrecoverable position of a trusted scientific observer. He *must* be for the future (he has so willed it) a prejudiced experimenter. He has the fearful responsibility on his shoulders of his premature claim to a "discovery," of his unfortunate attempt to force his shadowy hypothesis of the comma-bacillus upon Europe as a solid result of scientific method, and this must render all his work on this subject for the future rightly liable to suspicion and doubt. Though we may credit him with perfect sincerity, we can never regard him as otherwise than hopelessly biassed.—*Medical Times and Gazette.*

A CENTRAL TUMOR CAUSES JACKSONIAN EPILEPSY.—Dr. William Osler, of the University of Pennsylvania, records in the January issue of *The American Journal of the Medical Sciences* the history of an instructive case of Jacksonian epilepsy, the main points of difference between which and true epilepsy are the slow onset, local in character, beginning in (or in mild attacks confined to) one limb or a single group of muscles; the gradual extension until the side is involved, or in severe attacks the entire body; loss of consciousness late, not early and sudden as in true epilepsy; and, lastly, the muscular contractions are clonic.

His case lasted over fourteen years, the convulsions beginning in the left hand, at first monobrachial, then extending to the leg, afterwards becoming unilateral, and finally general; at first without loss of consciousness. For the first nine years of the illness there were remarkable intermissions, lasting for six or seven months, once an entire year. Six years after the onset the leg got weak and stiff. For four years, the tenth, eleventh, twelfth, and thirteenth of the illness, the seizures were frequent. During this period there were six weeks of unconsciousness, in which the spasms were very frequent, from fifty to eighty in the day. Ten months prior to the final attacks there was freedom from convulsions. The intellectual faculties were unimpaired.

The case was unusual in the limitation of the lesion to the ascending frontal convolution and to its fasciculus of white matter, scarcely involving the gray substance, which is com-

monly affected in cortical epilepsy. The accurate localization and the remarkable absence of tissue-changes in the immediate vicinity give the case the nature of an exact physiological experiment. With this limited lesion of the motor area there was permanent paralysis with contracture of one extremity and epileptiform convulsions. Another feature of interest in the case is the light it throws on the situation of the leg-centre. The fibrous mass was situated entirely within the anterior part of the paracentral lobule, limited in extent, confined chiefly to the medullary fibres of the superior frontal fasciculus, and only touched the gray matter in places. A point to be referred to is the absence of the paralysis of the leg for the first six years; for if the convulsions and monoplegia were caused by the same lesion, how explain the late onset of the latter? From the fibroid state of the tumor it might reasonably be inferred that it was originally larger and had shrunk; but the absence of puckering on the surface, and the way in which the margins merged with the contiguous parts, make it probable that the growth was always small, so small in fact that at one period of its development it may have caused sufficient irritation to induce the convulsions, and yet at the same time not involve the special fasciculi of white fibres to the extent of producing weakness of the leg, or monoplegia.

THE RELATION BETWEEN SICK HEADACHE AND ASTIGMATISM.—Mr. H. Bendelack Hewetson read a paper on this subject at the Leeds and West Riding Medico-Chirurgical Society, and showed six cases, as well as related the notes of several others, in which patients of ages from 12 to 36 had been for many years the victims of periodic attacks of migraine. Between the attacks of migraine there had been chronic dyspepsia and vertigo in walking in several of the cases. Two could bring on an attack of vomiting by sewing. All had some form of astigmatism, either mixed or compound, hypermetropic or myopic. All were completely cured by wearing proper correcting cylinders constantly. Mr. Hewetson believed that, when astigmatism of an abnormal character (or in some rare cases even a simple state of hypermetropia) existed in a neurotic subject, it might be the entire cause of periodic sick headache, with its accompanying dyspepsia, and could be cured by suitable glasses constantly worn. Mr. Hewetson related Dr. Lauder Brunton's experience on this subject, but thought that the chief agent in producing this neurosis was the astigmatic element in the visual defect in most cases which had come under his notice; and it evidently had little relation to the amount of an optical defect, unless that defect were complicated by astigmatism. Astigmatism in one eye, or eyes of varying degrees of optical error, would cause the

same condition in neurotic subjects.—*British Medical Journal*.

PHYSICIANS ON SCHOOL BOARDS.—At the meeting of the Vienna Public Medicine Society, Dr. Baginsky, a well-known writer on school hygiene, drew attention to the advisability of medical inspection of schools. His conclusions were as follows: that, notwithstanding the improved hygienic condition of schools, the infantile organism is still subjected to injurious influences depending on school-attendance; that improvement is for this reason not one to be intrusted to architects and pedagogues, but to be carried on on a physiological basis; that it is therefore fitting that the decision as to improvements, both as regards buildings and systems of teaching, should be submitted to the physician; that every school committee should have a physician among its members; that the activity of every school committee as a whole, and of the medical member in particular, should be continuous; that periodic revisions do not fulfil the desired aim; that absolute independent power of deciding should be permitted to no member of such a committee, either as regards changes in the form of the school or in the studies,—not even to the medical member; that any practising physician should be able to become a member of a school committee when he by examination could show his fitness for the office. The passing of the "Physikatexamen" (a special examination for medical officers of health) would be proof of such fitness.—*Med. Press*.

REPAIR OF TENDONS AFTER DESTRUCTION.—At a recent meeting of the Berlin Medical Society, Dr. Gluck reported on a patient whom he had shown to the Society in February, in whom the tendons of the extensor communis digitorum and the extensor indicis had been destroyed in consequence of a phlegmonous affection at the back of the hand. Dr. Gluck replaced the tendons by a plait of catgut fibres, extending from the metacarpo-phalangeal articulation to the transverse dorsal carpal ligament. The operation had succeeded perfectly, the functions of the missing tendons being now completely performed, ten months after. He also showed another patient, aged 76, on whom he had performed the same operation rather less extensively, but with equally good results. He believes that the irritation of function exerts a regenerative influence on the catgut, so that, instead of being absorbed, it becomes organized. He has tried a similar experiment with divided nerves, by stitching one extremity to each end of a decalcified bone drainage-tube, with the result that they have become united. This method has been recommended also by Dr. Vendoit, of Liège, and called by him "névrotisation du tube osseux." Dr. Gluck strongly recommends both operations.—*British Medical Journal*.

CHOLERA-PRECAUTIONS.—The dread of cholera, and the obvious necessity of taking all possible precautions against its introduction and—more fearful still—against its spread, have opened the eyes of the Viennese to a number of sanitary defects in their midst. A writer in the *Allgemeine Wiener Med. Zeitung* draws attention to the want of proper closet-accommodation, and calls upon the Stadtphysikat and all other sanitary authorities to see that there is proper provision of closed closets in all houses, and especially in public places, hotels, coffee-houses, schools, railway-stations, theatres, and generally wherever people congregate. He complains, and with truth, that accommodation in this direction is insufficient, and that the condition of the discharge-pipes in even much-frequented hotels is a deplorable one,—offensive to the guests, and dangerous to the health of the inmates. Let us hope and *make sure* that all our own closet arrangements are perfect.—*Medical Press.*

DISPOSAL OF REFUSE IN VIENNA.—One of the most important innovations during the year is the new method that has been adopted in Vienna of collecting and removing town refuse. In place of doing this in open carts as heretofore, and as, alas! is the custom in many English towns, each household is supplied with a barrel with a close-fitting lid. When this is filled, the lid is well fastened on, the barrel placed on the cart and removed to the place appointed, without the possibility of any household dust and filth, impregnated with disease-germs, being blown about, and possibly disseminating disease along the line of route. One would think that all sanitary authorities would at once take the hint and do likewise; but the ways of sanitary authorities are not our ways, nor their thoughts our thoughts.—*Medical Press.*

MISCELLANY.

ANNUAL REPORT OF THE NATIONAL BOARD OF HEALTH.—The report of the Board was presented to Congress February 2. It especially considered the history of Asiatic cholera in this country, and urged the importance of making investigations into the nature of the disease, its mode of communication, methods of introduction, and its clinical history. An appropriation of forty-three thousand dollars was asked for to carry on this work by the National Board, and it was further recommended that half a million dollars be appropriated to assist State and local boards in preventing the introduction and the spread of infectious diseases.

THE HEALTH OF CINCINNATI.—We are indebted to the health-officer of Cincinnati,

Mr. C. W. Rowland, for the following figures, which controvert statements which have appeared in our pages and elsewhere as to the bad sanitary condition of the city and the unusual prevalence of epidemic disease. It is positively declared that the sanitary condition of Cincinnati was never better than it has been this winter, and scarlatina and diphtheria have not prevailed epidemically. During November, 1884, the total number of deaths from the former was only ten, and from the latter only six, and both diseases were distributed as to locality. Total deaths from diphtheria in 1884 were seventy-two, from scarlatina sixty-four. The following will give the mortality for the preceding years:

	Diphtheria.	Scarlatina.
1883	78	201
1882	118	336
1881	105	60
1880	103	134
1879	152	546
1878	156	435

These records are open to the public. They show, contrary to the general belief, that the health of the city was unusually good last year, notwithstanding recognized sanitary defects. The total number of deaths in 1884 was 5667; in 1883, 5916; in 1882, 6873; and in 1881, 6101.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY FROM JANUARY 18, 1885, TO JANUARY 31, 1885.

PROMOTIONS.

LIEUTENANT-COLONEL JOHN E. SUMMERS, SURGEON.—To be Surgeon, with rank of Colonel. January 9, 1885.

MAJOR JOS. R. SMITH, SURGEON.—To be Surgeon, with rank of Lieutenant-Colonel. January 9, 1885.

CAPTAIN EGON A. KOEPPER, ASSISTANT-SURGEON.—To be Surgeon, with rank of Major. January 9, 1885.

APPOINTMENT.

HENRY I. RAYMOND.—To be Assistant-Surgeon, with rank of First-Lieutenant. January 12, 1885.

WEBSTER, WARREN, MAJOR AND SURGEON.—Granted leave of absence for one year, on surgeon's certificate of disability. S. O. 20, A. G. O., January 24, 1885.

TREMAINE, W. S., MAJOR AND SURGEON.—Granted leave of absence for one year, on surgeon's certificate of disability. S. O. 14, A. G. O., January 17, 1885.

MAUS, LOUIS M., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for two months, on surgeon's certificate of disability, with permission to leave the Division of the Missouri. S. O. 16, A. G. O., January 20, 1885.

TAYLOR, B. D., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect between March 15 and April 1, 1885, with permission to leave Department limits. S. O. 10, Department of Texas, January 26, 1885.

STEPHENSON, WM., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Omaha, Neb., and ordered to Fort Niobrara, Neb., for duty. S. O. 6, Department of the Platte, January 19, 1885.

KRAN, J. R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered for duty in Department of Missouri. S. O. 23, A. G. O., January 28, 1885.